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SIERRA LEONE

SELECTED ISSUES

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SELECTED ISSUES

October 16, 2024

Approved By
The African Department

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CONTENTS

MOBILIZING MINING REVENUE IN SIERRA LEONE[1]

Sierra Leone is a resource rich economy, and its mining sector can generate revenue to finance its development goals and ensure debt sustainability. Sierra Leone previously incorporated its mining fiscal regime for industrial miners into mineral license agreements that are difficult to modify. Negotiated tax concessions, combined with acute capacity challenges in revenue administration, are hindering revenue performance and have led to an elevated reliance on fees and trade taxes which increase investor costs, hindering competitiveness. Sierra Leone legislated a new fiscal regime - the Extractive Industries Revenue Act (EIRA) - in 2018 for new investments. Applying the EIRA could significantly boost revenue performance, whilst also ensuring taxes are responsive to changes in economic conditions. Stronger revenue performance will require a stronger revenue administration. Efforts to improve mineral royalty compliance are starting to pay dividends but NRA will need to bolster its resources and widen its skill sets.

A.   Mining in Sierra Leone: An Overview

1.   Sierra Leone is a resource rich country with significant reserves of rutile, bauxite, iron ore, gold, diamonds, limonite, platinum, and zircon. Mineral production in Sierra Leone has been occurring from at least the 1920's, with the enactment of minerals legislation in 1927 (GoSL, 2018). The extractive sector plays a critical role in the economy, contributing some 7 percent of GDP and 80 percent of goods exports, but only employs about 2.84 percent of the labor force given its capital-intensive nature.

2.   Inbound investors hold most of the large-scale mining licenses in Sierra Leone and the fiscal terms of their operation are determined by individual agreements signed with the government. As of June 2024, there were 21 active large scale mining licenses. Most minerals are exported with little processing or local value addition.

3.   The country also has a large artisanal mining sector focused primarily on the production of rough diamonds and gold. Artisanal mining is a significant source of employment and artisanal miners in Sierra Leone were estimated to represent about 2.6 percent of the labor force in 2019 (SLEITI, 2019). Most artisanal miners operate independently, without the support of cooperatives. There are an estimated 700 active sites in the country, of which 485 mine diamonds and 200 gold (SLEITI, 2019). In 2021, artisanal mining represented 42 percent of the total export value for gold, 33 percent for diamonds, and 59 percent for columbite-tantalite ore (coltan).

4.   The government faces challenges in regulating the artisanal sector and ensuring compliance with fiscal, environmental, and social standards. Some of the most lucrative mining sites are in remote areas which hampers the monitoring and regulation of mining activities. This

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[1] Prepared By Dan Devlin (FAD), Isabela Duarte (FAD), and Garth Nicholls (AFR).

remoteness, combined with the high-value nature of the gold and diamonds and capacity constraints in key agencies, create opportunities for under-reporting of production and illicit export.

5.   Over recent decades, the mining sector in Sierra Leone has been impacted significantly by multiple shocks, affecting growth and exports. The decade-long civil war from 1991-2002 disrupted mining activities and caused substantial loss of life and damage to infrastructure. The Ebola outbreak and a sharp fall in iron ore prices in 2014 led to another suspension of mining activities and a significant decline in foreign investment and exports. The Covid-19 pandemic of 2020 again impacted production, associated with travel restrictions and worldwide supply chain disruptions. Disputes with companies have also led to disruptions: in 2019 for example, the government cancelled or suspended the licenses of some large mining companies for failure to comply with statutory obligations, leading to a halt to iron ore output (Text Figure 1).

Text Figure 1. Sierra Leone: Merchandise Trade: Value of Exports
(Million USD)

Source: BSL and IMF staff calculations.
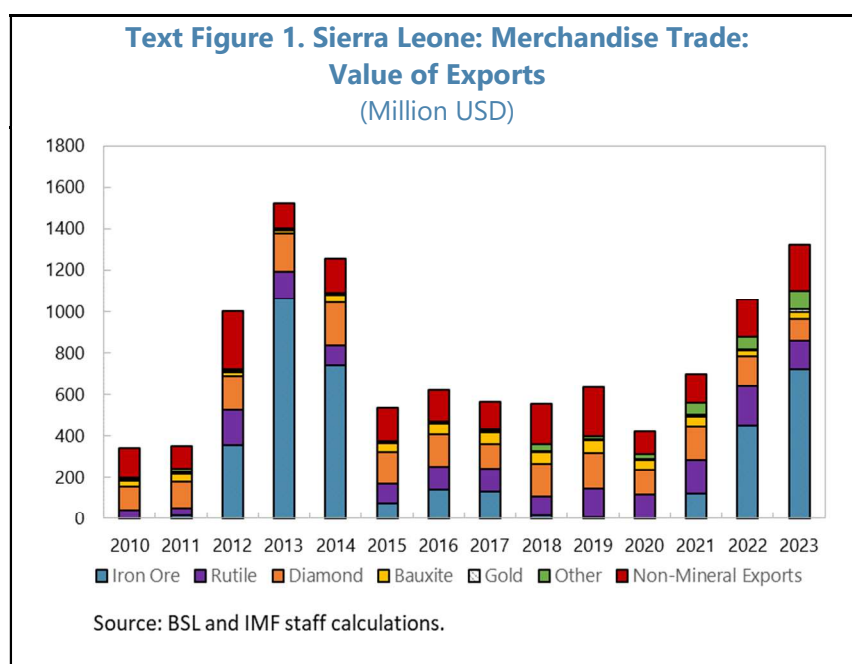
6.   The National Revenue Agency (NRA) is the primary agency administering the fiscal regime. NRA's role in revenue collection was expanded in 2018 with the introduction of the EIRA, with the transfer of responsibility for the assessment and collection of mineral royalties. Within NRA, the Extractive Industry Revenue Unit (EIRU) manages the handling of all extractive-industry related taxes, but faces acute capacity constraints with only 6 staff. The Ministry of Mines and Mineral Resources (MMMR) is responsible for non-revenue policy making. The National Minerals Agency (NMA) is the sector regulator, but also has a central role in diamond valuation for royalties and other fiscal instruments. Sierra Leone also has a cross-cutting Minerals Advisory Board which has a key role in setting the nation's overall mineral development strategy.

B. Mining Revenues and the Fiscal Regime

Fiscal Regime Structure

7.   **Most mines operating in Sierra Leone have negotiated their own fiscal terms, which are incorporated into mineral license agreements.** Sierra Leone has adopted a fiscal regime structure focused on taxes and royalties, with historical practice being to negotiate fiscal terms such as royalty rates, income tax provisions, or exemptions from import duties, on a project-by-project basis. Investors therefore operate under a range of fiscal terms. Moreover, these license agreements protect mining companies from subsequent changes in the fiscal regime through the use of stabilization provisions. Mining companies also incur revenue instruments that apply sector-wide, such as requirements for state participation, as well as surface rental payments and fees (e.g., for environmental licenses). Many mining projects also make smaller payments to local landowners and sub-national authorities.

8.   **To move away from project-level negotiations, Sierra Leone legislated a robust fiscal regime law for the natural resources sector in 2018.** In a break with the previous practice, the EIRA – which covers both minerals and petroleum – was intended to be the primary fiscal regime for new mining investments. The EIRA incorporated the imposition of royalties and introduced a new resource rent tax (RRT) to enable the government to share in project returns if a project becomes highly profitable. The EIRA also relies on income tax act (ITA) provisions such as transfer pricing and interest limitations, while the ITA includes fiscal instruments such as the CIT and withholding taxes.

9.   **When the EIRA was introduced, a strong protection was included that while existing projects would retain their fiscal terms, there was no room for terms to be further modified.** The preservation of existing fiscal terms recognized that countries can damage their overall climate for mining investment by ad-hoc or discriminatory tax increases after investment decisions have been made. However, the EIRA also clearly seeks to discourage renegotiations by directing NRA to both ignore any alterations and to revert back to the current ITA and EIRA law if fiscal terms are changed (how this is playing out in practice however is discussed further in Section C).

10.   **The IMF has actively engaged with Sierra Leone on mobilizing mining revenues.** This has included support to develop the EIRA law and related explanatory materials; the implementation of a safe harbor for iron ore prices; compliance support to the EIRU; and training on fiscal modeling of resource projects.[2] This is in addition to wider support on revenue mobilization.

Mining Revenue

11.   **During 2010-23, fiscal revenue receipts from the mining sector were relatively low (median of 0.9 percent of GDP) and volatile (a standard deviation of 0.4 percent of GDP).** Since 2011, there has also been a noticeable downward shift in average fiscal revenues from the

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[2] Most of this support was provided with financial support from the multi-donor Managing Natural Resource Wealth (MNRW) Thematic Fund.

mining sector (Text Table 1). Two phases can be observed. First, during 2010 to 2014, mining revenues averaged about 1.5 percent of GDP, with a standard deviation of about 0.3. But following the Ebola crisis and other developments in the iron ore sector, average fiscal revenues from the sector declined by about half to represent 0.7 percent of GDP. In 2023, the sector contributed revenue of around 0.6 percent of GDP. This is below national expectations.[3]

Text Table 1. Sierra Leone: Total Fiscal Revenues from the Mining Sector, 2010-23
(In percent of GDP, unless indicated otherwise)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Revenues	**0.7**	**1.5**	**1.8**	**1.6**	**1.3**	**0.7**	**0.8**	**0.5**	**0.9**	**1.0**	**0.7**	**0.9**	**0.6**	**0.6**
Mining Royalties	0.1	0.1	0.4	0.6	0.5	0.1	0.3	0.2	0.2	0.2	0.3	0.5	0.2	0.3
Mining Licences	0.1	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1
Income and Withholding taxes	0.4	0.4	0.8	0.8	0.6	0.4	0.4	0.1	0.4	0.5	0.2	0.2	0.2	0.1
Surface Rental	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trade taxes	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Other, (incl. Mining lease)	0.0	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Memo:														
Mining revenues as a share of total domestic revenue	11.1	20.7	24.1	20.6	17.3	9.7	10.9	7.0	10.6	10.8	8.2	9.8	8.6	8.1

Sources: Sierra Leonean authorities, and IMF staff calculations

12.   Sierra Leone's recent mining revenue has come from three main sources: mineral royalties, license and environmental fees, and income taxes including withholding taxes (Text Figure 2). Other sources of revenue such as surface rents and trade taxes contribute only a small amount to total revenues, and in the case of surface rents, are paid primarily to sub-national authorities and local communities. None of Sierra Leone's main mines are currently subject to the RRT introduced in the EIRA, and no state participation dividends have been reported.

Text Figure 2. Sierra Leone: Revenue by Fiscal Instrument Percentage of Total Revenue, 2019-21

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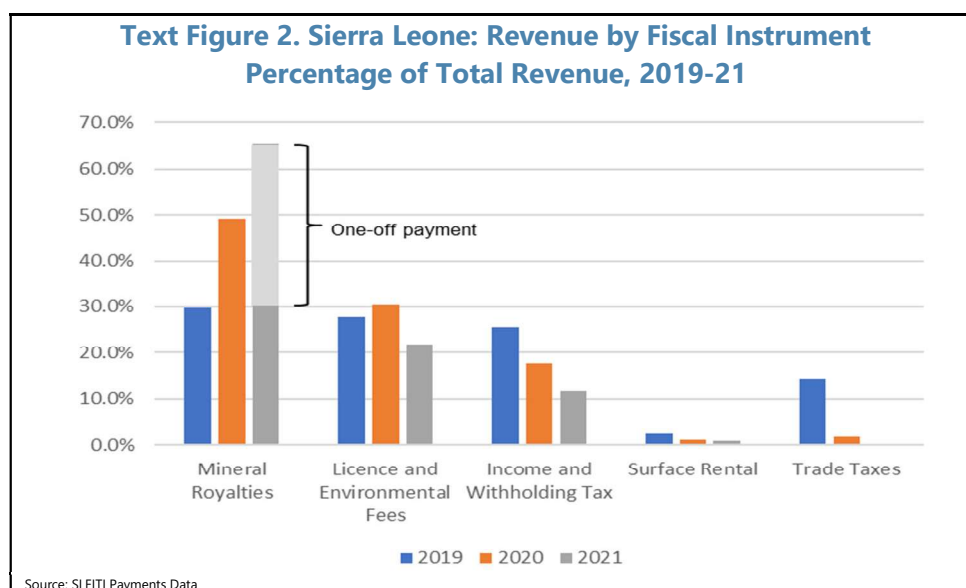
[3] The Medium-Term National Development Plan (2024-2030) includes an aspirational target to increase mining revenues to 10 percent of revenues by 2030.

13.   Mineral royalties continue to be a key source of mining revenue to the budget. These royalties remain the cornerstone of the fiscal regime but fluctuate based on production and prices. In recent years, mineral royalties represented around 0.2-0.3 percent of GDP. Royalties were boosted substantially in 2021 with a one-off payment to settle a prior dispute.[4]

14.   Income tax revenue fluctuates over time but remains confined to only a few taxpayers. Between 2019 and 2021 revenues from income and withholding taxes averaged 0.1 percent of GDP. During this period only two taxpayers routinely paid CIT, supplemented by ad hoc withholding tax payments from a wider group of 14 taxpayers (SLEITI, 2023). This is despite most of the operating industrial mines in Sierra Leone being relatively established.

15.   Fees are playing an elevated role in revenue collections, but at a cost to competitiveness. Fees for mining licenses, environmental licenses and monitoring, and trading permits have contributed nearly one-third of total revenue recently (about 0.2 percent of GDP). These fees provide a stable source of revenue, as they are clearly defined and difficult to avoid. But they directly increase project costs, reducing the competitiveness of the fiscal regime.

C.   Current Issues in Mining Resource Revenue Mobilization

The Fiscal Regime Structure, Mining Costs, and Further Concessions

16.   The overall fiscal regime for existing investors has only limited opportunity to capture price upswings, which could increase political pressure. The reliance on mineral royalties, trade taxes and fees mean the overall fiscal regime can only expect to see modest changes in revenue during commodity price booms. This can raise political pressure if citizens cannot see the State participating in higher commodity prices through higher revenues.

17.   This existing fiscal regime structure can contribute to a stop-start cycle of mining operations. As the overall fiscal regime relies heavily on fiscal instruments such as fees and royalties, the sector is more vulnerable to periods of low commodity prices. Because mining companies must continue to

Text Figure 3. Sierra Leone: Fiscal Regime Composition of Government Share of Project Net Cash Flows
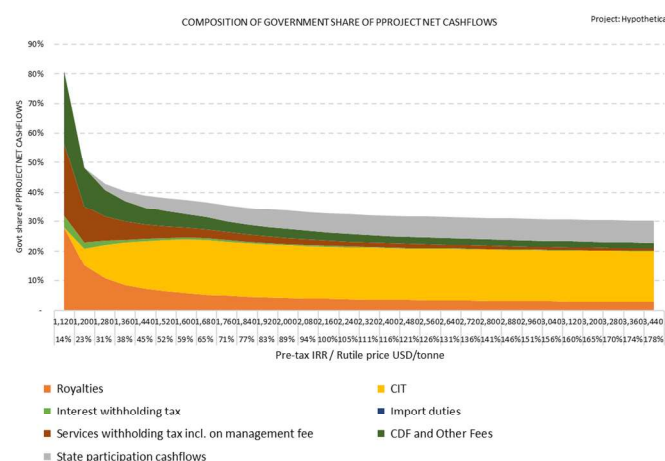
Source: IMF

Notes: CDF – Community Development Fund. This figure shows a decomposition of the Average Effective Tax Rate (AETR) for a hypothetical prospective project in Sierra Leone. The AETR is the net present value (NPV) of total government revenue expressed as a percentage of the NPV of the project before tax. A downward sloping curve indicates a regressive fiscal regime.

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[4] https://www.reuters.com/world/africa/gerald-group-resolves-iron-ore-dispute-with-sierra-leone-2021-05-11/

make these payments even in challenging economic conditions, they may suspend production - as occurred with iron ore (2014) and rutile (2020). Text Figure 3 illustrates the regressivity of the fiscal regime.

18.   Suspended operations (and disruptions to revenue) has flow-on effects: policymakers can rush to agree new fiscal terms, at the expense of future revenues. Pressure to avoid mine closures can induce decision makers into quickly agreeing to unbalanced fiscal terms. In 2021 for example, Sierra Rutile was granted a reduced royalty rate of 0.5 percent (from 4 percent) after a threat to cease production.[5] This has come at a cumulative revenue loss estimated at around USD 12.6 million by end-2023 (Text Figure 4) and USD 25 million by 2026.

Text Figure 4. Sierra Leone: Fiscal Regime Revenues from a Prospective Project Recent Negotiation Practice vs EIRA Terms

Source: IMF. Note: State participation dividends assumed to be paid to the budget.
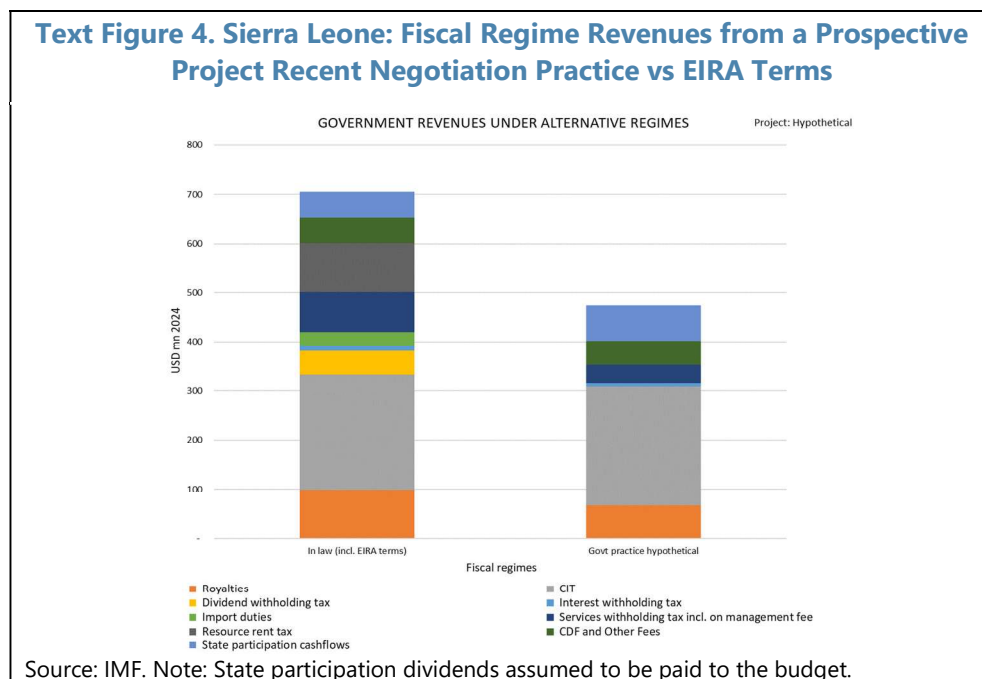
19.   This tendency to renegotiate overlooks the advantages of the EIRA's fiscal regime. As noted earlier, the EIRA is much better suited to accommodating fluctuations in mining conditions. And as noted in Section B, the EIRA's provisions on negotiated fiscal terms means the renegotiated agreements may have tenuous legal foundations.

Tax Policy Issues

Abusive Transfer Pricing

20.   With most major mining projects in Sierra Leone foreign owned, they are at risk of cross-border tax planning via profit shifting. International profit shifting involves MNEs undertaking internal group transactions to take advantage of tax differentials between countries.

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[5] See 2021 suspension announcement: https://slobserver.org/wp-content/Library/210519%20Sierra%20Rutile%20-%20Suspension%20of%20operations.pdf

With mining fiscal regimes containing additional taxes (to capture location-specific economic rents), this increases the incentive for MNEs to allocate income to lower-tax countries (see IMF, 2021).

21.   The ITA prescribes that arm's length prices must be used. The ITA requires taxpayers to apply the internationally recognized arm's length standard, and in 2021 Sierra Leone implemented more detailed regulations for the use of international quoted prices for the export of commodities to related parties. Despite these protections, Sierra Leone has faced acute challenges in detecting and combating profit shifting via transfer prices (discussed later under Revenue Administration).

Transfers of Interests in Mining Companies

22.   NRA faces challenges in identifying offshore transactions that might incur CGT and in asserting a legal right to tax them. Capital gains associated with resource projects can be substantial, and taxable transactions may be for mine assets or involve the sale of shares of a company operating a mine. Offshore transactions can be difficult to detect, and investors may not report them in a timely way or undertake them through complex legal structures. These structures can also raise disputes about the allocation of international taxing rights.

Tax Incentives and the Negotiation of Fiscal Terms

23.   Income tax incentives are not usually decisive in whether an investment will proceed, but they are nevertheless being employed. Where countries afford tax holidays or other profit-based incentives, they increase the risk of revenue loss without meaningfully influencing the investment decision. Despite the risks, recent actions have continued with concessions: agreements with Marampa, Kingho, and Sierra Rutile will all forgo revenue.

24.   A stylized prospective project example illustrates the potential revenue consequences of forgoing the EIRA fiscal terms. This hypothetical project[6] has a 15-year production life and a real internal rate of return of around 22 percent before taxation. Recent government negotiating practice - based on negotiations with Marampa, Sierra Rutile, and Kingho Mining - has been to reduce mineral royalty rates, afford CIT concessions, exempt the investor from the RRT and reduce withholding taxes. The revenue impact is presented below relative to the EIRA-based fiscal regime.

25.   For this stylized project, recent government practice would transfer one third of total revenue back to the investor. The primary impacts are felt via a 1 percent reduction in royalty rates (at a cumulative total cost of around USD 30 million) and the exclusion of the RRT (cumulative lost revenue around USD 120 million – see Text Figure 4). In addition to these revenue losses, the concessions heighten the reliance on CIT and state participation dividend payments which can both be susceptible to the profit shifting risks noted earlier.

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[6] This project is based on Sierra Rutile's public presentations of the Sembehun project. However, as the full model is not publicly available, this section required additional assumptions by IMF staff to align the key modeling results.

26.   A principal issue with recent government practice is that the concessions are not needed to make the project viable. For the hypothetical project example, a project under the EIRA fiscal regime would be viable after tax at assumed prices, despite the regime collecting higher revenue over time. Recent practice therefore is transferring project income back to investors for projects that already had strong prospects of proceeding (that is, with project returns exceeding investor hurdle rates for investment).

Tax Stabilization

27.   Tax stabilization provisions complicate tax reform and the natural evolution of tax law. Stabilization provisions increase the difficulty of tax reform (e.g., tax base protection measures) and lengthen the transition to a new fiscal regime – even when the policy changes are part of internationally-agreed initiatives such as under the Inclusive Framework process. NRA, for example, has needed to undertake detailed legal analysis on the impact on existing investors before considering the introduction of a safe harbor price for iron ore sales made between related parties, even though there is a clear grounding for this approach in the ITA.

State Participation and Fiscal Risks

28.   Sierra Leone has a mandate to take a ten percent stake in large scale mining projects. The MMDA provides that for large scale mining licenses, the state shall acquire a free carried interest of 10 percent of the value of the license. This policy choice has implications for resource revenues, and wider linkages to the country's development strategy and fiscal governance.

29.   Sierra Leone established the Sierra Leone Mines and Minerals Development and Management Corporation, passing legislation in 2023. The purpose of the corporation is to carry out minerals and mining development management and related activities on behalf of Sierra Leone and to facilitate state participation investment in mines and minerals development.

30.   This new mineral development corporation has clear fiscal implications and increases fiscal risks. The corporation is tasked with holding and managing the State's interest in mining projects, and so any dividend revenue might be retained under its control - outside the budget. Notably, the company has been given freedom to borrow, and to finance or guarantee the operations of a project company, and to identify minerals for its own development/management.

31.   Its strategy will need to align with national economic and development goals. The new mineral development corporation risks drawing much-needed revenue away from the budget. To justify this approach, the entity will need to execute a strategy clearly in line with national development goals (e.g., industrialization, local value addition linking into international markets),

with enhanced reporting of its activities. It will also require access to technology and skilled staff who can analyze project alternatives and make strategic investment decisions.[7]

Revenue Administration

Core Administration Skills and Capacity Constraints

32.   Key agencies face acute capacity constraints, and NRA is still building its sectoral experience. One cross-cutting issue that is hindering revenue mobilization is the highly constrained capacity of key agencies, particularly NRA. A combination of under-resourcing and skills shortages undermines the ability of central agencies to monitor industry practices, detect tax avoidance, and stop outright evasion and smuggling.

33.   In addition, NRA has no access to international tax information exchange mechanisms, hindering its information gathering powers. Information exchange between tax authorities is essential to understanding the international operations of multinational enterprises operating in Sierra Leone. Some functions which might be ordinarily considered as being sourced in Sierra Leone (and therefore subject to taxation) can be hidden from NRA if transactions are conducted offshore. This makes transfer pricing audits much more challenging: NRA may struggle to even ascertain whether a corporate group is selling to related parties.

34.   Better information would improve compliance. Efforts to review iron ore pricing practices and develop a safe harbor pricing methodology are a strong step to reduce information gaps on iron ore pricing. Other measures to strengthen information availability will take time, as developing country tax administrations can struggle to use them effectively.

35.   Legal analysis and negotiation skills are complimentary skill sets that need strengthening across key agencies. Legal analysis and the development of legal strategy will be required in several areas. These include legal support to craft a narrower, time-bound fiscal stability provision. In addition, as tax audits begin to include more complex areas such as transfer pricing, expertise will be needed to assess their legal foundations and the strength of the Commissioner's case if an audit escalated to the courts. Any rebalancing of existing agreements would require the development of a negotiation strategy and legal analysis of existing MLAs.

36.   Narrower technical skills, such as in diamond valuation also need to be maintained. These technical skills help ensure that royalty revenue and income taxes are applied to the appropriate value of local production. These skills need to be maintained and complimented by elevated monitoring to reduce risks of corrupt valuations, and to protect officials from coercion.

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[7] As an alternative approach for the near term, any dividend revenue received could be used to generate revenue by engaging specialists to engage companies on transitioning to the EIRA fiscal regime.

D. Conclusion and Policy Discussion

37.   Sierra Leone effectively has two approaches to its fiscal regime for raising revenue from mining: the EIRA and recent practice. The fiscal regime adopted in the EIRA law would raise more revenue, whilst also being more responsive to changes in mineral prices and project economics. In contrast, current practice relies more heavily on generating revenue from mineral royalties and fees applied to mining investors. Current practice increases the prospects of a stop-start pattern of mining operations and for investors to seek new fiscal terms if economic conditions deteriorate.

38.   Moreover, the authorities have continued to engage in the negotiation of fiscal terms, despite acute capacity constraints and disappointing outcomes. Without thorough analysis and fiscal modeling, there are elevated risks that agreed fiscal terms are unbalanced towards investors and forgo revenue unnecessarily. These outcomes are also difficult to unwind due to the use of broad fiscal stabilization provisions. For Sierra Leone, a high impact change would be to dispense with the negotiation of fiscal terms and rely on the EIRA.

39.   Stronger revenue administration would also increase revenue collections, based on a clear strategy of where to focus scarce resources. Sierra Leone's key agencies remain highly capacity constrained, but efforts to strengthen capacity are critical particularly for the effective administration of profit-based fiscal instruments. With substantial revenue raising challenges across all the main fiscal instruments, compounded by a scarcity of resources available to respond, a key question for decision makers is where to focus their efforts.

40.   NRA could focus its near-term compliance efforts on ensuring mineral producers are complying with their reporting obligations and setting mineral prices according to the arm's length standard. Once compliance in mineral pricing is stable (or earlier if resources permit), NRA could focus on strengthening the administration of other royalty and taxation issues. Experience in conducting tax audits and training in transfer pricing will improve taxpayer compliance further.

41.   Stronger revenue mobilization could be reinvested into further improving the investment climate. As CIT compliance improves (and with a renewed use of the RRT), this could create fiscal space that could either flow directly to improving the fiscal position, or which could be used to reduce fiscal instruments that are harming Sierra Leone's competitiveness.

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SOCIAL SPENDING IN SIERRA LEONE[1]

Summary: *Existing social spending programs need to be scaled up to achieve the SDGs and support the large share of the population under extreme poverty and food insecurity. Our simulations reveal that about 5.6 percent of GDP in additional annual resources are required over the medium term to achieve the health and education SDGs by 2035. Against the backdrop of a tight fiscal space, this financing gap could be significantly reduced to 0.8 percent of GDP with the implementation of a credible set of reforms to increase the efficiency of spending, including in health and education, mobilize more domestic revenues, and boost sustainable growth and private sector participation.*

A. Introduction and Overview

1.   Social spending in Sierra Leone, including social protection programs and spending on health and education, is key to its continued development but is constrained by the tight fiscal space and its high dependance on donor support. There are multiple social programs which are generally uncoordinated and are heavily dependent on donor support. Our analysis shows that performance of social protection programs (SP) in the country compared with peers is mixed, with coverage and adequacy generally lower than for other countries in the region and key inefficiencies in health and education spending. More importantly the social spending programs are insufficient to fill the gap needed to meaningfully reduce poverty and vulnerability, and achieve the sustainable development goals (SDGs).

2.   Increasing the efficiency of health and education spending would support achieving better outcomes and create fiscal space for other priority spending. A regional comparison of health and education spending against observed outcomes indicates that there is room to increase the efficiency of spending in Sierra Leone, particularly of health spending, which is below ECOWAS average. Policies to increase efficiency of spending in health and education include increasing spending on non-salary inputs, improving targeting, and establishing performance-based mechanisms.

3.   There are good reasons for Sierra Leone to enhance its social spending, including developing a well-coordinated and funded social safety net programs (SSN). Among these reasons are:

- Sierra Leone is highly vulnerable to exogenous shocks, and a strong social safety net could help protect households from the cost-of-living crisis.

- A strong social safety net could help protect vulnerable households from large relative price misalignments (e.g. fuel and electricity tariffs adjustments) and thereby help build support for structural reforms.

- Poverty is high and a strong SSNs could help promote inclusive growth.

4.   Social spending is protected under the proposed ECF arrangement. This is important, precisely because of the immense benefits that social spending provide to strengthen the socio-economic fabric of the society. The program includes a floor on social spending of about 0.8 percent of GDP in 2024, and a similar number for 2025. These numbers are based on the social programs that have been detailed in the GoSL budget address 2024. Previous ECF arrangements also protected social and poverty reduction spending.

5.   In the medium term, the country will need to boost spending to meet the UN health and education SDG targets. Achieving some SDGS within the next decade is possible but the authorities will need to implement strong reforms and secure support from development partners to close a significant financing gap. Our estimates indicate that the financing gap to achieve the targets related to education and health by 2035 is of about 5.6 percent of GDP annually. Authorities could reduce this gap significantly (to about 0.8 percent of GDP) with the implementation of a credible set of reforms to increase the efficiency of spending, mobilize additional domestic resources, and boost sustainable growth and private sector participation.

6.   The purpose of this chapter is to take stock of social spending in Sierra Leone and assess the financing gaps that need to be filled for the country to achieve the SDGs in health and education in the medium-term. In particular, this chapter aims to (i) assess the adequacy and efficiency of existing social spending, including social protection and health and education spending, (ii) determine the financing gap to achieve the SDGs in health and education in the medium term, and (iii) explore options for closing this gap.

B.   Trends in Social Indicators

7.   Sierra Leone has made some progress on improving its social indicators, but it still lags peers (Annex I).

- **Human Development**: SLE has made steady progress in HDI since 2001. Life expectancy has increased 14.7 years, expected years of schooling by 3 years, and mean years of schooling by 0.6 years. With an index value of 0.458 nonetheless the country ranked 181 out of 195 countries in 2022.

- **Access to electricity:** In 2001, about 8.5 percent of the population had access to electricity. By 2021, this share had risen to 27.5 percent.

- **Food Insecurity:** Since 2015, food insecurity has consistently risen from 75 percent of the population to about 80 percent in 2021.

- **Multi-dimensional poverty:** Sierra Leone's income poverty headcount remains at 56.7 percent considerably higher than the average of 39.38 percent for Sub-Saharan Africa. Average extreme poverty stands at about 13 percent, while the country's multidimensional poverty currently estimated at 58 percent.

- **Income inequality:** Income inequality, as measured by the Gini index decreased during 2003-2018 (from 40 to 35.7). Since 2011, however, the Gini index has increased, indicating a worsening of inequality. Gender inequality has also steadily declined over time.

- **Political violence**: The political peace negotiated to end the civil war has been sustained, and political power has been transferred peacefully since 2002.

8.   **Progress on the social well-being indicators has been driven by specific policy interventions.** Since the end of the civil war, the authorities have implemented four development plans.[2] These plans focused on reducing poverty and laying the groundwork for sustainable development through policies to develop human capital, build institutional capacity, enhance mechanisms for a competitive political environment and promoting economic development. The new MTNDP, to be implemented during 2023-2030, aims to build on these achievements, but also seeks to achieve the country's global and regional socio-economic commitments in respect of the UN 2030 Agenda and the sustainable development goals (SDGs), the African Union 2030 Agenda as well as ECOWAS' vision 2050.

C. Existing Social Spending Programs in Sierra Leone

9.   **There are five broad categories of social spending in SLE (Annex II).** For the purposes of this analysis, we placed these programs into two broad groups: (i) contributions to free health care and free education initiatives (Annex III)[3], and (ii) social protection programs. There are three broad programs included in the social protection group: (i) cash transfers, namely social pensions, and unconditional cash transfers,[4] (ii) social assistance programs, such as national reintegration of street children and programs to support persons with disability; and (iii) employment/active labor market policies to promote youth employment.

10.   **The social protection programs are mostly donor funded with a small contribution from the state.** The two largest social protection programs in the country are administered by different MDAs, NacSA for the unconditional cash transfer and Ministry of Education for the school feeding program. There are limited mechanisms to ensure coordination between these and other programs. In recent years, limited fiscal space has constrained government's ability to fund their

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[2] These plans include (i) the poverty reduction strategy paper 2005-07; (ii) the Agenda for change, PRSP 2008-12; (iii) the Agenda for prosperity, PRSP 2013-2018; and (iv) the Medium-term development plan (MTNDP) 2013-2018.

[3] These include the non-contributory health initiatives, and education support programs, which includes school feeding.

[4] The first large-scale unconditional cash transfer program (Ep Fet Po) was launched in 2014 in four districts, with an initial design to support approximately 12,000 households providing each household with about USD15 per month – about 25 percent of their consumption basket. The program expanded in 2016 to include beneficiaries supported by NaCSA under the Ebola-response SSN project to reach over 28,000 beneficiary households in 11 districts. The program lasted until July 2023, and it has been complemented by several one-off support programs. Recently the authorities launched a new phase of its cash transfer programs, the Productive Social Safety Nets and Youth Employment Program, which combines unconditional cash transfers that are still expected to benefit about 38,000 persons, with a productive safety net, or cash for work, program that emphasizes youth employment. In 2021, WFP also provided unconditional cash and food transfers to 26,000 severely food-insecure households.

share in these programs, with actual financing during the year significantly underperforming initial budget allocations. Lack of reliable funding from the government disrupts operations and negatively affect beneficiaries.

11.   Social protection in SLE is guided by a National Social Protection Policy (NSPP) adopted in 2011. Under the arrangement, social protection services are provided by several agencies, including NaCSa. The authorities are working on a new social protection framework. A draft bill proposes two key components: (i) a National Social Protection Authority (NSPA), and; (ii) a Social Protection Fund (SPF). The NSPA would be given responsibility to, inter alia, establish a mechanism to identify and secure funding for social protection, advise on desirable changes in social protection policy and its implementation; and consolidate and coordinate all public social protection initiatives through policy a framework for each sector including government's initiatives;. The SPF would pool resources available for funding social protection programs and it would be managed by the National Social Protection Authority.

D.   Adequacy and Efficiency of Existing Social Spending

12.   The proportion of the population covered by social protection and labor market support programs and adequacy of these programs are lower than among peers (Annex IV). The programs in SLE cover about 18 percent of the total population compared to a median of 20 percent for LICs. The adequacy of benefits for both the poorest and richest quintiles, which measures the total transfer amount received by all beneficiaries in the population (or quintile) as a share of the total income of expenditure of beneficiaries, is also lower than in Sierra Leone's peers (Annex III). This reflects the episodic nature of social programs in Sierra Leone and its lack of fiscal space. According to the World Bank (2021), Sierra Leone compares well against low-income countries with respect to social assistance coverage of the poor, with coverage of 23 percent of the poorest quintile compared with 18 percent in other countries.[5] But adequacy of the unconditional cash transfer program (Ep Fet Po) and social pension benefits compared poorly with similar programs elsewhere across the world. For example, the Ep Fet Po UCT accounted for only 17 percent of the average household consumption expenditure of the poorest quintile, compared with 19 percent for similar programs across a group of 52 countries from all regions. Similarly, social pension benefits in households' total consumption expenditures were 17 percent for the poorest quintile compared with an international average of 27.3 percent.

13.   On efficiency and targeting, Sierra Leone's social protection program performance appears mixed (Annex V). While the poverty headcount reduction effect is lower than among peers, and the benefit incidence for the poorest quintile is the second lowest, other indicators suggest a more positive story. In particular, the benefit-cost ratio and the benefit incidence for SLE in the poorest quantile is higher than among SSA countries and LICs. At the same time, the benefit-incidence and beneficiary incidence in the richest quintile is the lowest among peers. According to the World Bank (2021), while the social assistance programs have experienced some

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[5] Sierra Leone Public Expenditure Review 2021, Social Assistance Programs. World Bank, Washington, DC.

success in targeting with a discernable impact on poverty, there is much more work to be done. They noted that more work is required to better target vulnerable groups such as women and people with disabilities under the youth employment programs. Better targeting is also needed to lower inequality.

14.   There is room to improve the efficiency of spending on health and education. Health and education spending represent a significant share of total social spending.[6] To assess the efficiency of social spending, we use the IMF Expenditure Assessment Tool to evaluate how health and education outcomes in Sierra Leone compare with the outcomes in countries with similar income or spending levels. In this comparison, we build an efficiency frontier based on the best outcomes countries can potentially achieve conditional on their current spending. The closer a country is to the frontier, the more efficient its spending is. This analysis indicates that there is room to increase the efficiency of spending in Sierra Leone, particularly of health spending, which is below ECOWAS average (Annex VI).

15.   Recent expenditure reviews for health and education by the World Bank outlined policies to increase efficiency of spending in the health and education sectors. According to the World Bank,[7] increasing the efficiency spending on health would require prioritizing capital spending, strengthening district-level financial management, balancing personnel and supply costs, shifting focus to primary healthcare, and enhancing efficiency through performance-based funding. Reforms to increase the efficiency of education spending include prioritizing education spending on non-salary inputs, disadvantaged students, and performance-linked subsidies, improving teacher efficiency, strengthening quality assurance and local agency capacity, and gradually increasing education financing over the short to medium term.

16.   Better execution on support programs and domestic capital would improve expenditure effectiveness and budget credibility. At almost 100 percent on average, budget execution on education and health has been good overall (Annex VI and Annex VII). However, within expenditure categories there is marked variability in execution particularly for support programs and domestic capital. Goods and services as well as domestic capital for both education and health excluding that related to addressing the COVID-19 pandemic in 2020 and 2021, were significantly under executed and could reflect shortfalls in funding and or inadequate capacity absorption. On the other hand, the higher execution by the Ministry of Health since 2021 primarily for administrative and operating costs, suggests inadequate budget planning and controls. These issues indicate that key education and health expenditures are not consistent with budget intentions for service delivery and raise concerns about allocative efficiency and of budget credibility. Efforts to enforce commitment controls consistent with the PFM Act, stronger fiscal discipline and political will,

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[6] In 2019, education spending comprised 16.9 percent of total expenditure, while health spending comprised 6.5 percent of total expenditure. Teachers and health professionals represent about 25 percent of the total wage bill.

[7] Sierra Leone Public Expenditure Review 2021, Health and Education, World Bank, World Bank Washington, D.C.

and strengthening the capacity of budget officials to enhance planning and ensure sharper focus on results would assist in addressing these shortcomings.

E. Medium-Term Financing of Developmental Goals

17.   We estimate that Sierra Leone would need to raise about 5.6 percent of GDP annually in additional resources to achieve the health and education SDGs by 2035 under a baseline scenario. To calculate this financing gaps, we use the IMF Fiscal Affairs Department's SDG Financing Tool (SDG-FiT).[8] The framework relies on a long-term dynamic financing model with endogenous growth driven by public and private investment in human and physical capital and efficiency. We focus on the SDGs directly related to social spending, ensuring quality access to good health and well-being and education.[9] We calibrate this framework to incorporate information on macroeconomic, fiscal, and financing indicators that are consistent with the long term projections in the new Extended Credit Facility (ECF) as well as information on the recently rebased GDP. Under this baseline ECF scenario, the financing gap to reach the SDGs by 2035 in Sierra Leone is estimated at 5.6 percent of GDP annually.

18.   Tight financing constraints limit the room for more spending on social objectives. Expenditure reprioritization and domestic revenue mobilization will be critical to strengthen social spending and allow a scaling up during periods of shocks. To raise additional resources to meet the SDGs, the authorities should also focus on policies to increase spending efficiency, while improving public financial management practices in line with the existing PFM regulations. There is also a need for a coherent strategy to strengthen the framework for targeted social support and its ability to support the vulnerable in case of shocks. Finally, the country should continue to seek additional external concessional financing and encourage private sector participation in areas that lend themselves to public-private partnerships.

19.   A credible set of policies to rationalize spending, increase domestic resource mobilization, and boost long term growth and private sector participation could reduce the financing gap to 0.8 percent of GDP annually in an alternative reform scenario. Leveraging the SDG-FiT framework, we assess the impact of different policies to reduce the SDG financing gap. We simulate the impact of policies under three alternative scenarios. The financing gaps to achieve the SDGs by 2035 under these alternative scenarios vary from 3.8 to 0.8 percent of GDP annually Annex VIII).

   a) **Spending Rationalization (Scenario A):** In the first scenario, we assume that the authorities implement policies to gradually increase the efficiency of spending in health, education, and infrastructure in the medium term. We also assume that the authorities can reallocate about

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[8] For more information see Benedek et al (2021). An online version of the framework is available at SDG Financing Tool (imf.org)

[9] Gaspar, V., D. Amaglobeli, M. Garcia-Escribano, D. Prady, and M. Soto, 2019, "Fiscal Policy and Development: Human, Social, and Physical Investment for the SDGs," Staff Discussion Note 19/03. International Monetary Fund, Washington, D.C

1 percent of GDP from non-SDG to SDG related current spending. In this scenario the financing gap is estimated at 3.8 percent of GDP.

b) **Spending Rationalization and Revenue Mobilization (Scenario B):** Under scenario B, we assume the spending rationalization measures outlined in scenario A. We also assume that the authorities expand on their efforts under the ECF to boost domestic resource mobilization beyond the medium term, and that they gradually increase the domestic revenue to GDP ratio to 14 percent of GDP by 2040. Additional financing needed to achieve the SDGs in this scenario are estimated at 1.7 percent of GDP.

c) **Spending Rationalization, Revenue Mobilization, and Structural Reforms (Scenario C):** In this scenario, we assume that the authorities maintain the reforms outlined in scenarios A and B. We also assume that the authorities implement a set of structural reforms to boost potential growth and private sector participation, including reforms to gradually increase labor force participation and private investment. In this scenario, potential growth could increase to 5.5 percent of GDP while additional financing needs to achieve the SDGs by 2035 would be reduced to 0.8 percent of GDP.

20.   In our exercise, financing needs are still large even under the most ambitious reform scenario, highlighting the importance of ensuring strong commitments from the development partner community. Sierra Leone will need significant support from development partners to meet its development objectives. The planned IMF governance diagnostic mission should provide a holistic view of governance vulnerabilities in the country and outline priority reforms. Maintaining strong political commitment to these reforms is likely to boost external support for the country's development agenda.

F.   Conclusion and Policy Recommendations

21.   Existing social spending programs in Sierra Leone needs to be reformed to improve their adequacy and efficiency. Key areas for reform include improving their targeting, and integrating the separate social programs, with a readily available data base of recipients through finalizing the development of the social protection registry and investing in financial inclusion and digitalization. The programs need to expand to supply adequate support for the most vulnerable but avoid becoming a disincentive to labor force participation. Improving efficiency could help to free up resources to help close the financing gap in SDGs. A well-structured and managed social protection program could help to secure more donor support for human capital development.

22.   The proposed SPF should be on budget.[10] Establishing the SPF as an off-budget facility could create significant fiscal risks that may remain unknown and/or insufficiently understood or

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[10] As July 3, 2024, the authorities had not made a final decision on whether this would be an off-budget or on-budget fund.

defer costs to the future. This is precisely because it is not likely to be subject to the same scrutiny as traditional measures that are on budget.

23. **More fiscal space is needed to close the gap on funding social spending without undermining macroeconomic stability**. Because the tax to GDP ratio is among the lowest among SSA-LICs there is room to raise more tax revenue through tax policy and enforcement of administrative measures already enacted. Strengthening PFM practices, in line with existing PFM regulations, could also help to improve spending reprioritization, spending efficiency, and generate fiscal savings.

24. **Structural reforms to boost potential growth could help expand the fiscal space**. Improvement in trade facilitation could enhance the competitiveness of domestic firms, allowing them to expand, including by tapping into the opportunities offered by the AfCFTA. Behind the border reforms to improve the environment for doing business are also critical to develop a thriving and dynamic private sector. Finally, policies to reduce gender inequality could help to boost productivity and GDP growth.

Annex I. Indicators of Socio-Economic Well-Being

Sierra Leone v. Sub-Saharan Africa and LIC countries. Human Development Index
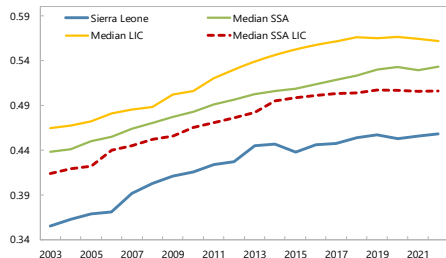
Sierra Leone v. Sub-Saharan Africa and LIC countries. Life Expectancy (Years)
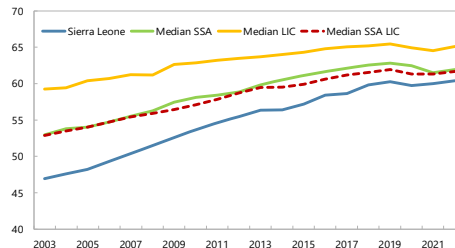
Sierra Leone v. Sub-Saharan Africa and LIC countries. Years of Schooling. (Percent of population)
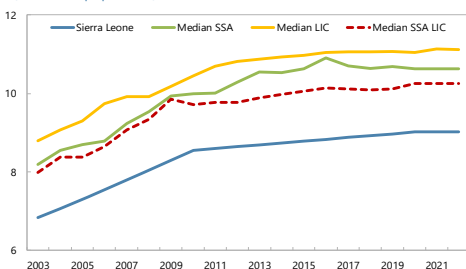
Sierra Leone v. Sub-Saharan Africa and LIC countries. Access to Electricity.
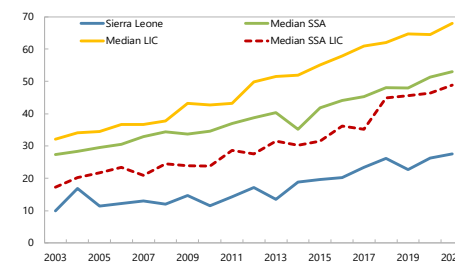
Sierra Leone v. Sub-Saharan Africa and LIC countries. Prevalence of undernourishment (Percent in population)
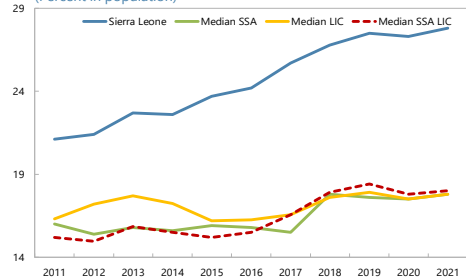
Sierra Leone v. Sub-Saharan Africa and LIC countries. Gender Inequality Index
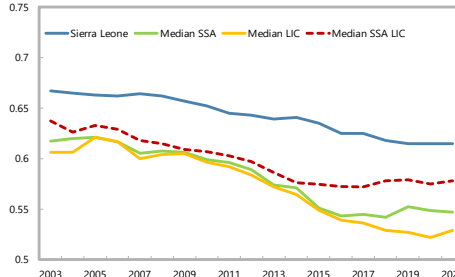
Sierra Leone and Sub-Saharan Africa. Multi-dimensional Poverty Indicators.
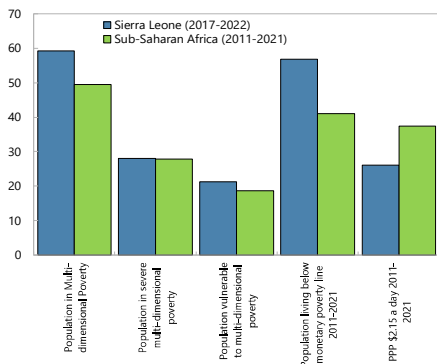
Sierra Leone and Sub-Saharan Africa and LIC countries. Gini index

Sources: World Bank, ASPIRE database, World Bank Development Indicators FAO, UNDP, and IMF staff calculations

Annex II. Main Social Spending Programs

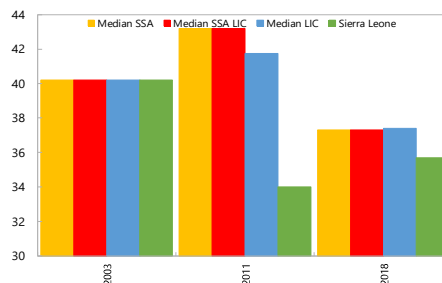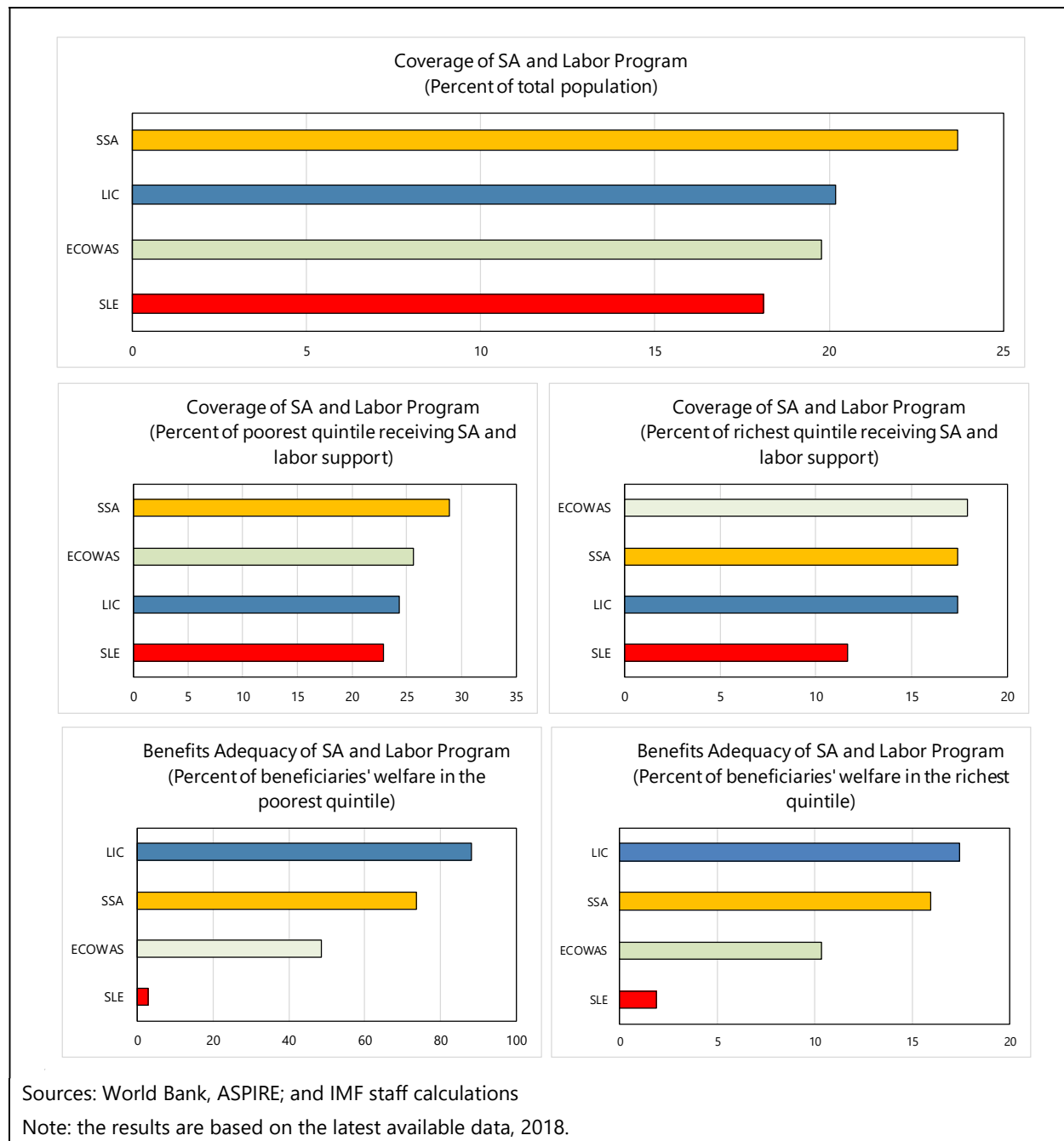| Program	Coverage Description
Cash Transfers	
	Unconditional cash transfers (EP Fet Po): Cash transfers to extremely poor households with the objectives to:Making investments in human capital; Increasing consumption in poor and food-insecure households;Mitigating shocks; Additional support to households that have members who are persons living with a disability.
	Productive Social Safety Net and Youth Employment (PSSNYE): This new program replaced the EP Fet P0. Under the PSSNYE NaCSa will continue to provide cash transfers to extremely poor households; Additional support to households that have members who are persons living with a disability.
	Social Pension Program: To support war veterans and the elderly
	Emergency cash transfers: One-time emergency cash transfers to some houseuolds following the onset of Covid-19 pandemic
Free healthcare Initiative	
	Improving access to quality free health care; Procurment of free health care and cost recovery drugs; Dental and medical board; Health service commission; National HIV and AIDS commission; Teaching hospitals complex administration; Post graduate college of health specialists; National public health commission; Pharmacy board services; Devolved function-health care services; Support to national emergency medical services (NEMS)-Ambulance services;Constrution of port loko Hospital; Construction pharma grade wharehouse and ancillary structures
Education Support Programs	
	Ministry of Basic and Secondary Education; Ministry of Technical and Higher Education; Teaching service commission; Devolved function- education services; Civil service training college;Student's loan scheme secretariat; Free quality school education program (Tuition Fees subsidies for school going pupils,Examination Fees for WASSCE); Delivering free quality education; Rehabilitation and expansion of schools; Diet from boarding home schools;Establishing/strengthening of laboratories in senior seocondary schools; Construction of rehabilitation of non-formal learning centres; support to library service

National School feeding program |
Other Social Assistance	
	National reintegration of street children;Gender and children affairs; Grants to welfare institutions; Diets for approved school &remand home; Program for disabled persons; Livelihood support for persons living with disability; Establish rehabilitation centre for drugs addicts; Rehabilitation of Approved Schools and Remand Homes
Employment/Active Labour Market Programs	
	Productive Social Safety Net and Youth Employment (PSSNYE): In addition to cash transfers, this program will provide employment to 7000 youths in the rural areas and 6000 youth in the urban areas.
	Graduate Internship Program - training (vocational, life skillls, cash for training)
	Youth in cash wash project and entrepreneurship and business development training
	Support to youth in fisheries; suport to youth in Agriculture
	National Tree Planting (cash for work)
	Sierra Leone community development driven project II- Gietrenk:To progressively reduce poverty by empowering communities to sustain their economic livelihood
	Pro-poor growth for peace consolidation (GPCIV): To improve the employment and income status of youths in rural communities by providing enhanced economic infrastructure along selected agricultural value chains, constructed by using labor-intensive approaches.
	Enhancing management of rural renewable energy for productive use
	Community Driven Development Projects: Projects in communities across the country to address the issues of infrastructural breakdown that came as a result of the ten-year civil war that ravaged the country.
	Rapid Community Development Initiatives; Sierra Leone Disability Project; Green Public works; Pro Poor-Growth for Peace Consolidation and Youth Employment (GPCYE) Project
Sources: Government Budget and Statement of Economic and Financial Policies (2024), and IMF staff calculations.	

Annex III. School Feeding Program

1.   The school feeding program was launched in 2018 as part of an overall strategy to address food insecurity and nutritional issues among students and strengthen human capital development. The program is funded by a combination of GoSL and donor resources. Several organizations, including WFP, help implement the program daily. The program is coordinated by a School Feeding Secretariat.

2.   During 2021/22, the school feeding program supported over 700,000 pupils in 14 districts in Sierra Leone. The program has grown steadily from 50,000 pupils at its start in 2018. In 2019, it provided meals to 320,000 pupils. The target is to feed 800,000 students, about 60 percent national coverage, during 2024/25 school year (see https://mbsse.gov.sl/western-area-to-benefit-from-school-feeding-targeting-800000-pupils/). But this goal is threatened by delayed payments to some program partners.

3.   According to the authorities, the school feeding program has had a positive impact on human capital development (NDP 2024). They indicate that the program has played an important role in the enrolment and retention rates in primary schools. Declines in the rate of child illness and mortality has also been attributed to the program.

4.   Looking ahead, the authorities should tackle several challenges to ensure that the school feeding program delivers on its full potential. Among these challenges is the need for more resources to keep current with the existing providers of school meals, and to expand the program to all regions in the country. The accumulation of arrears to some partners in the program could retard its expansion, creating stops and starts. There is also a need to promote more fully the local sourcing of vegetables and other food stuff for the school meals program. Such a practice could help to stimulate domestic production and help to build community support for the school meals program while providing employment and income to local farmers. Another important issue is the need to strengthen the capacity of the school feeding program secretariat to improve its monitoring, accounting, and reporting on the program. This should include putting together a credible database on the school feeding program from which analysis can be done on its performance and efficiency. Enhancement of governance is also needed in the proper vetting of participating agencies.

Annex IV. Coverage and Adequacy of SSN Program

Coverage of SA and Labor Program
(Percent of total population)

SSA	
LIC	
ECOWAS	
SLE	

0   5   10   15   20   25

Coverage of SA and Labor Program
(Percent of poorest quintile receiving SA and labor support)

SSA	
ECOWAS	
LIC	
SLE	

0   5   10   15   20   25   30   35

Coverage of SA and Labor Program
(Percent of richest quintile receiving SA and labor support)

ECOWAS	
SSA	
LIC	
SLE	

0   5   10   15   20

Benefits Adequacy of SA and Labor Program
(Percent of beneficiaries' welfare in the poorest quintile)

LIC	
SSA	
ECOWAS	
SLE	

0   20   40   60   80   100

Benefits Adequacy of SA and Labor Program
(Percent of beneficiaries' welfare in the richest quintile)

LIC	
SSA	
ECOWAS	
SLE	

0   5   10   15   20

Sources: World Bank, ASPIRE; and IMF staff calculations

Note: the results are based on the latest available data, 2018.

Annex V. Efficiency of SSN Programs

Benefits Adequacy of SA and Labor Program
(Percent of beneficiaries' welfare in the richest quintile)

Poorest Quintile: Benefit-Cost Ratio of SA and Labor Programs
(Percent of total transfer amount)

Poorest Quintile: Benefits Incidence of SA and Labor Programs
(Percent of total transfers received by the population)

Richest Quintile: Benefits Incidence of SA and Labor Programs
(Percent of total transfers received by the population)

Poorest Quintile: Beneficiary Incidence of SA and Labor Programs
(Percent of total transfers received by the population)

Richest Quintile: Beneficiary Incidence of SA and Labor Programs
(Percent of total transfers received by the population)

Sources: World Bank, ASPIRE; and IMF staff calculations

Note: the results are based on the latest available data, 2018.

Annex VI. Efficiency of Health and Education Spending

Government Education Spending and Outcome, Secondary, Latest Value Available 1/
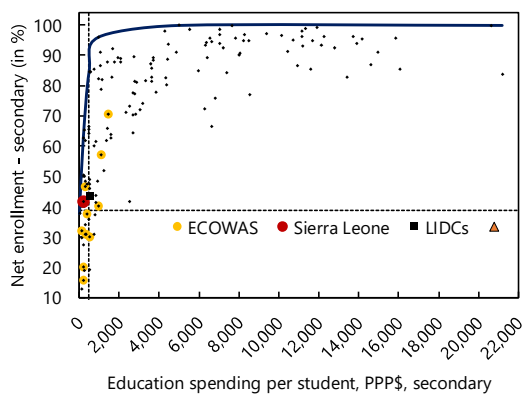
Health Efficiency Frontier, Latest Value Available (0 - 5,000 PPP$) 1/

Net enrollment – secondary (in %)

Education spending per student, PPP$, secondary

ECOWAS   Sierra Leone   LIDCs

Healthy life expectancy, 2019 2/

Total health expenditure per capita, PPP$

ECOWAS   Sierra Leone   LIDCs
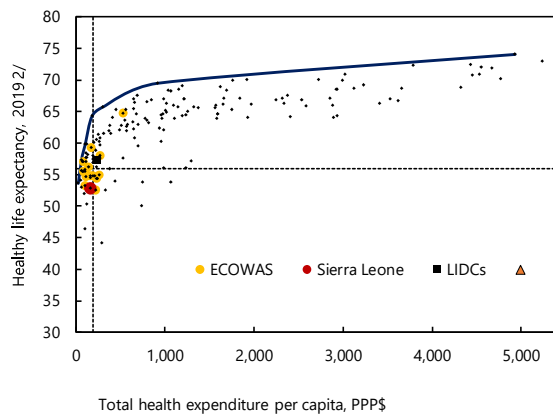
1/ Dashlines are the average for ECOWAS

Sources: IMF Expenditure Assessment Tool (AET)

Annex VII. Execution of Education Expenditure Relative to Budget Allocation, 2019-23

Expenditure components	2019	2020	2021	2022	2023
Wages and Salaries	95.8	100	104.5	107.6	92.3
Non-Salary, Non-Interest, Recurrent Expenditures	100.8	77.5	114.7	122.3	78.2
Domestic Capital	20.7	47	102	71.1	93.6
Total	**94**	**82.6**	**105.3**	**95.2**	**91.2**

Notes:

1. The years 2020, 2022 and 2023 include supplementary budget figures.

2. Total non-salary, non-Interest, recurrent expenditures for education include expenditure for basic education, technical and higher education, grants devolved to education services to local councils, law school, civil service training commission, teaching hospitals

Annex VIII. Execution of Health Expenditure Relative to Budget Allocation, 2019-23

Expenditure components	2019	2020	2021	2022	2023
Wages and Salaries	126.6	115.5	102.2	108.8	98.6
Non-Salary, Non-Interest, Recurrent Expenditures	39	111	151.1	77.6	93.6
Ministry of Health	54.3	73.9	145.2	250.8	132.6
Agencies and programs including NaCOVERC	52.5	117.2	152.4	48.9	63.5
Agencies and programs excluding NaCOVERC	52.5	77.3	54.5	101	63.5
Domestic Capital	7.8	70.2	1,915.50	360	79.5
Total	**75.2**	**103.3**	**135.4**	**104**	**96.8**

Notes:

1. The years 2020, 2022 and 2023 include supplementary budget figures.

2. Total non-salary, non-Interest, recurrent expenditures for health include expenditure for MoH, pharmacy board services, grants devolved to health services to local councils, medical supply agency, health service commission, HIV & AIDS commission, dental and medical board, NaCOVERC.

3. Recurrent expenditure to MoH include administrative and operating costs, overseas treatments, drugs distribution, ambulance services.

4. Transfers to NaCOVERC was for COVID-19 pandemic. 2023 had allocation for NaCOVERC but no actual disbursement was done given the ease in COVID-19 pandemic.

Annex IX. SDG Financing Scenarios

Variables	Baseline	Spending Rationalization (A)	Spending Rationalization (A) + Revenue Mobilization (B)	Spending Rationalization (A) + Revenue Mobilization (B) + Structural Reforms ©
GDP per capita (in 2019 USD in 2030	1237	1235	1227	1233
GDP per capita (in 2019 USD in 2050	1827	1850	1869	2089
Revenue and grants (percent of GDP) in 2050	11.4	11.4	15.6	15.6
SDG Financing				
Additional grants needed annually to meet health and education SDG by 2035 (percent of GDP)	5.6	3.8	1.7	0.8

Sources: IMF Staff calculations

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Benedek, D., Gemayel, E., Senhadji, A., Tieman, A., 2021, *A post-pandemic assessment of the sustainable development goals*. Staff Discussion Notes No. 2021/003, International Monetary Fund, Washington, D.C.

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Sierra Leone Public Expenditure Review 2021, Social Assistance Programs, World Bank, World Bank Washington, D.C.

CLIMATE CHANGE AND FOOD INSECURITY: OPTIONS FOR BUILDING RESILIENCE IN SIERRA LEONE[1]

Abstract: *Sierra Leone is among the most vulnerable countries in the world to the hazards of climate change. The interlinkages between climate shocks, elevated levels of poverty and food insecurity, and high dependency on rain fed agriculture suggest that climate strategies will need to be integrated with the social protection framework. Our simulations suggest that while a strategy of cash transfers to affected households, external trade liberalization or lowering the cost of mobility are good standalone policy responses to food insecurity, a combination of all three as a package is likely to be most effective.*

A. Introduction

1.   Sierra Leone is highly vulnerable to the negative impact of climate change. This vulnerability arises from its poor levels of adaptive capacity and low resilience of key economic sectors to climate change hazards. Weak social economic indicators, high dependency in rain-fed agriculture, low insurance penetration, and limited fiscal space are among the factors that undermine the country's ability to adapt and that could potentially amplify the impact of climate change.

2.   There is a risk that climate induced shocks could have a negative impact on social indicators, increasing the levels of food insecurity and undernourishment of the population. Poverty and food insecurity levels in the country are high even for regional standards and have increased considerably in the past few years. The impact of climate shocks on output could be significant as predominantly rain fed agriculture represents some 30 percent of GDP. Climate change can have a negative impact on food security through its impact on domestic agricultural productivity.

3.   We estimate how climate shocks could affect food insecurity and assess the impact of different policy options leveraging a macro spatial model calibrated to reflect Sierra Leone's key socioeconomic indicators. We use the model to assess the impact of shocks to domestic agricultural productivity. Results illustrate the country's high level of vulnerability and indicate that this shock could have a persistent negative impact on output and food security indicators. Leveraging the model to assess the impact of different policy options, we conclude that boosting social protection programs, reducing the cost of food imports or lowering the cost of mobility could be important policy tools in building resilience to climate shocks.

B. Climate Risks in Sierra Leone

4.   Climate change is expected to increase temperature levels and change precipitation patterns in Sierra Leone. Average annual temperatures have increased by 1.32°C relative to the

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[1] Prepared By Isabela Duarte (FAD) and Garth Nicholls (AFR).

1950-1980 period. Climate models project that temperatures in the country will increase from 27.5°C to 27.7°C by 2050 and from 27.6°C to 28.1°C by 2070 (Text Figure 1). In a high emission, fast-warming scenario[2] average temperatures could increase to 28.9°C by 2070. There is significant uncertainty on the expected direction and magnitude of rainfall changes, with the consensus scenario projecting that total annual precipitations will not change (Text Figure 2).

Text Figure 1. Sierra Leone: Average Annual Temperature Under Different SSP Scenarios
(1960-2080, degrees Celsius)

FADCP Climate Dataset (v1)

Source: IMF Climate Dataset (Massetti and Tagklis, 2023).
Note: The grey line describes historical mean annual temperature based on observations. The black line describes the 30-year moving average of historical data around each 30-year period.

Text Figure 2. Sierra Leone: Projected Precipitation
(1960-2080, mm/yr)

FADCP Climate Dataset (v1)

Source: IMF Climate Dataset (Massetti and Tagklis, 2023).

5.   Sierra Leone is vulnerable to the impact of climate change. Weak levels of adaptive capacity and high sensitivity to climate change hazards leaves Sierra Leone among the 10 percent most vulnerable countries to the negative impact of climate change (Text Figure 3 (b)).[3] Adaptive capacity levels are low as resources available for adaptation in key sectors including food, water, and human habitat, are limited. The poor availability of resources stem, among other factors, from the country's weak social economic indicators, high food insecurity, low insurance penetration, insufficient levels of social protection, and limited fiscal space. The high sensitivity to climate change hazards relates to the country's high dependency on rain-fed agriculture and the poor quality of is infrastructure, which is sensitive to changing precipitation patterns and deforestation (see Annex I).

6.   Climate change could heighten health risks and increase the frequency and intensity of natural disasters. Sierra Leone is exposed to a broad range of climate related natural disasters including floods, landslides, storms, and wildfires (Text Figure 3 (a)). The country has one of the highest percentages of informal population residing in hazard-prone areas in Sub-Saharan Africa

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[2] SSP3-7.0

[3] IMF-Adapted ND-GAIN Index | IMF-Adapted ND-GAIN Index | Climate Change Indicators Dashboard

which could increase the human toll of natural disasters.[4] In 2017, a landslide in the western area killed more than 1,000 people (see Annex II). Changing precipitation patterns, unplanned urban occupation of flood- and landslide-prone areas, and increased erosion from deforestation could further intensify the frequency and impact of disasters. Changing climate patterns could also heighten health risks, including due to extreme heat exposure and contamination of water and sanitation systems.[5] Natural disasters in the country are likely to be associated with significant financial costs.[6]

Text Figure 3. Sierra Leone: Climate Change and Food Insecurity

(a) Number of Climate Related Incidents

Sources: IMF Climate Indicators

(b) ND Gain Index – Vulnerability Indicators

Source: IMF-Adapted ND-Gain Index

(c) Domestic Rice Production Post-Ebola
(t)

Source: FAO and IMF staff calculations

(d) Prevalence of Moderate or Severe Food Insecurity
(Percent of population)

Sources: Food and Agriculture Organization (FAO).

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[4] Over 60 percent of the urban population lives in informal settlements, with 25 percent of urban residents occupying coastal and low elevation areas, which are exposed to multiple hazards. For more information see Sustainable Cities: Urban Areas and Climate Change in Sierra Leone (worldbank.org)

[5] Projections of Human Exposure to Dangerous Heat in African Cities Under Multiple Socioeconomic and Climate Scenarios - Rohat - 2019 - Earth's Future - Wiley Online Library

[6] According to World Bank Document , a 1 in 25 years severity floods in Sierra Leone would cause damages of US$75 million (some 1.1 percent of 2024 GDP) while 1 in 50 years floods could cause damages of up to US$124 million (some 1.8 percent of 2024 GDP). In 2024, the government of Sierra Leone published a disaster risk financing strategy and implementation plan (2024-2029) to strengthen coordination and improve the management of financial risks related to natural disasters (see SL_DRFS-FINAL- compressed.pdf (mof.gov.sl))

7.   Food insecurity has increased steadily since 2015, and now affects over 80 percent of the population. The level of food insecurity in SLE is much higher than the median for the SSA and LICs as a group (see Text Figure 3 (d)). According to WFP's September 2023 Food Security Monitoring System Report, more than 70 percent of the surveyed population spent more than 75 percent of their total expenditure on food, compared to 15 percent in August 2019.[7] The same report also indicates that 70 percent of the surveyed population had to rely on some form of livelihood coping strategies, including purchasing food on credit, dissaving, selling productive assets, reducing health and educational spending, or eating seed stocks.

8.   Climate change induced shocks could be transmitted to food insecurity through their impact on domestic agricultural productivity. Agricultural production in Sierra Leone, which represents some 60 percent of employment and some 30 percent of GDP, relies mostly on small-scale farmers with poor access to irrigation and transportation systems, insurance, and farm inputs. Rice is the main staple food in the country, representing some 30 percent of total agricultural production. Rice production relies heavily on early season rainfall (March to May) which has been decreasing in the country.[8] Extreme weather events, such as floods and droughts, could also have a significant impact on rice yields. Although subject to uncertainty, available evidence on the impact of extreme weather events on rice yields in the region indicate that yield losses could vary from 27 to 40 percent.[9]

9.   The persistent impact of the Ebola pandemic on agricultural production illustrates the high sensitivity of rice production in the country to shocks. Following the Ebola shock, rice production sharply decreased from an annual production level of 1.2 million t in 2014 to 0.87 million t in 2015, a reduction of close to 30 percent. The shock had a persistent impact on production which remained below 1 million t for an extended period, only returning to pre-Ebola levels in 2021 (see Text Figure 3 (c)). The reduced planting during the 2015 June-August planting season, labor shortages, and transportation restrictions are among the factors explaining the immediate impact of the pandemic on rice production. The persistence of the shock is likely related to reduction in productive assets, as households resorted to crisis or emergency strategies to cope with the impact of the crisis, and to increasing structural constraints to productivity growth. [10]

10.   Climate induced shocks could have an impact on external balance, given the country's high reliability on food imports. Sierra Leone relies on rice imports to meet part of its consumption needs. In 2021, the country imported 641,000 tons of rice an amount close to 27 percent of total supply. Climate induced shocks that affect local production would likely lead to an increase in food imports, placing additional pressure on the current account and foreign reserves.

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[7] See docs.wfp.org/api/documents/WFP-0000153832/download/?_ga=2.204040213.40811049.1718651433-1326390100.1715873630

[8] Climate | Free Full-Text | Changes in Rainfall in Sierra Leone: 1981–2018 (mdpi.com)

[9] Frontiers | Flood-tolerant rice for enhanced production and livelihood of smallholder farmers of Africa (frontiersin.org), Changes in Rainfall and Temperature and Its Impact on Crop Production in Moyamba District, Southern Sierra Leone (scirp.org)

[10] Sierra Leone Economic Update 2023 : Enhancing Value Chains to Boost Food Security (worldbank.org)

This heavy reliance on imports also makes the country vulnerable to variations in the exchange rate and to short term international price shocks, including shocks related to climate events at large producer or consumer countries.

C. Assessing the Potential Impact of Climate Shocks on Food Security

Methodology

11.   To assess the impact of climate shocks on key economic variables we leverage a new model of food insecurity in a macro spatial framework.[11] The model is a general equilibrium open economy spatial model with heterogeneous households and with trade and migration linkages. The model replicates some of Sierra Leone's main characteristics, including subsistence consumption of food, limited access to finance, limited labor and goods mobility between urban and rural areas, and the possibility that households sell productive capital to cope with shocks.

Model Calibration and Data

12.   We rely primarily on the data from the household expenditure survey (2018) and the macroeconomic framework as the main sources of data to calibrate the key moments of the model (Annex IV). Other variables for which there is no primary source or information for Sierra Leone, we use data from similar countries as the default. These instances are indicated in Annex IV.

Quantitative Analysis

13.   Using our spatial model calibrated to SLE features, we simulate the impact of climate change induced shocks on agricultural productivity in Sierra Leone.

The Impact of Climate Induced Agricultural Productivity Shock (32 percent) on Food Insecurity[12]

14.   In this setup, the climate shock is modeled as a one-time two standard deviation shock to agricultural productivity in Sierra Leone. We gauge the size of the potential shock by looking at the evolution of primary cereals yields during 1961-2021. Food insecurity is gauged by undernourishment and the calorie deficit. A 32 percent fall in agricultural productivity is likely to have several effects on Sierra Leone (Text figure 4). First it would cause a sharp rise in the price of food (21 percent), a fall in real wages, and GDP. This translates into fall in food consumption, a fall in intake of calories and a 23 percent rise in undernourishment. On the supply side, the negative shock would reduce the capital stock. The fall in food output, fall in food consumption and fall in caloric intake would setup the conditions for increased rural to urban (also external) migration. Importantly,

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[11] For details, see Climate Change and Chronic Food Insecurity in Sub-Saharan Africa (imf.org) and Annex III.

[12] This measures two standard deviations of the growth in yields from primary cereals during 1961-2021. The data is derived from the FAOSTA database.

the duration of impact from the one period shock to agricultural productivity could last for at least 5 years or more on undernourishment, calorie intake, consumption, assets, capital and migration.

Text Figure 4. Sierra Leone: The Impact of a 32 percent Decrease in Agricultural Productivity

Sources: Model simulations
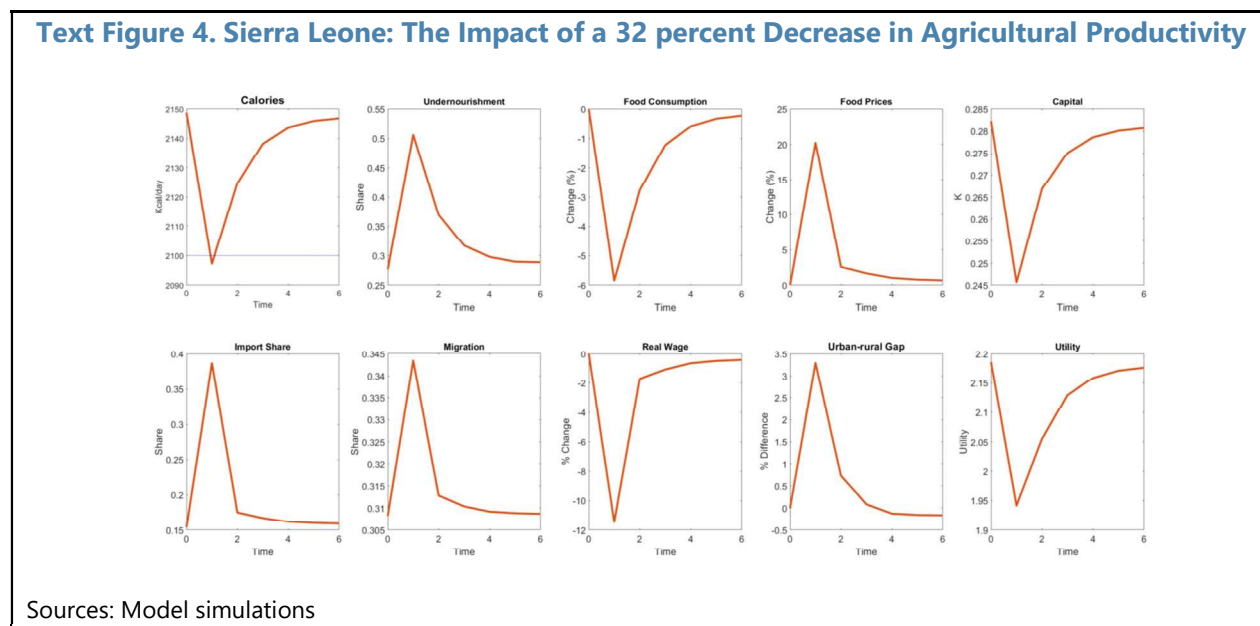
D. Policy Options

Increased Cash Transfers to Affected Households

15.   In this illustrative scenario, we assume a 2 percent increase in income tax, levied on the total population (urban and rural), to pay for cash transfers to the 80 percent of the population most at risk of food insecurity. In the steady state, the increased cash transfer lowers undernourishment by about 27 percent and increases household utility by 4 percent (Text Figure 5). The distributional impact of cash transfers appears to favor rural households. The reason is that compared with the urban households, rural households enjoy a larger fall in food prices; a proportionally higher increase in income, as farm income share is higher. These factors contribute to a reduction in the urban-rural real wage gap and helps rural households to increase their intake of calories proportionally more than urban households. The share of rural household assets also rise proportionally more than those of urban households int eh new steady state.

16.   As shown in the impulse responses, cash transfers help to support consumption (of both food and non-food goods) raise utility for households and by so doing avoids a full draw down of capital by rural households (Annex V, Figure 1). With the capital stock protected, rural households can start the process of replanting, raising productivity and thereby lowering domestic food prices and migration as the rural real wage gap becomes smaller. In effect, reducing the duration of the shock.

Text Figure 5. Sierra Leone: Steady State Effect of Cash Transfers

Source: Model Simulations
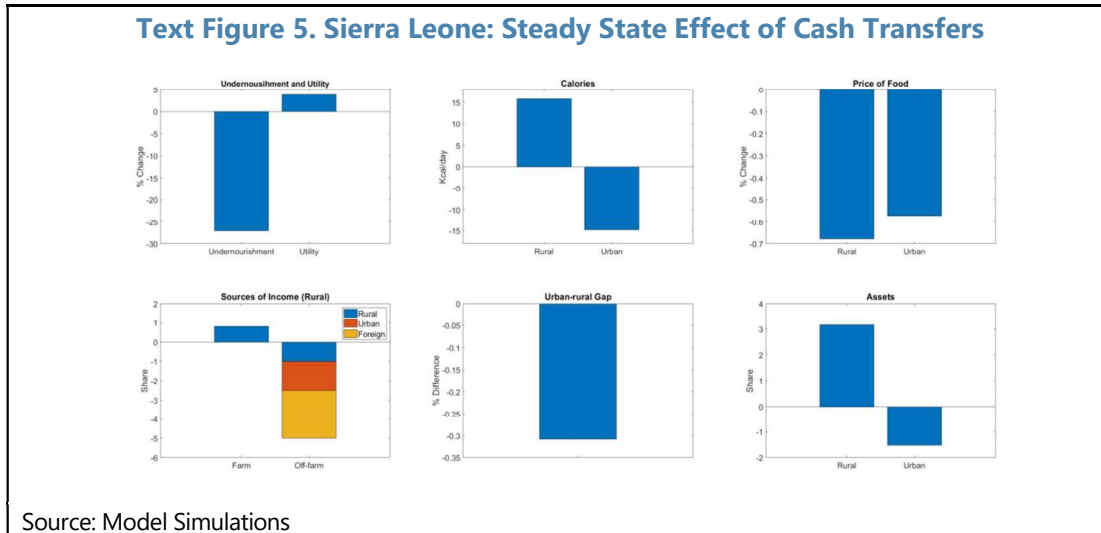
Lower Migration Costs

17.   Policies to lower costs and promote migration could help to build resilience and reduce the impact of a climate shock on food. Text Figure 6, shows the steady state impact on undernourishment and household utility of a 25 percent decrease in migration costs. In comparison to the baseline, undernourishment is 6.1 percent lower and household utility higher by 2 percent. Rural households appear to benefit most from the policy to lower migration costs. Food prices fall more for rural households and this is associated with a higher intake of calories in the new steady state. Calorie intake of urban households is lower. There is also an increase in the share of rural assets and farm income as households grasp the expanded set of opportunities afforded by lower migration costs to increase income, consumption, capital and utility. The urban-rural wage gap is also lower by 4.7 percent owing to higher rural household income. In sum, as in the case of the cash transfers, rural households also appear to benefit more than urban households from a policy to lower migration costs.

Text Figure 6. Sierra Leone: Steady State Effect of Lower Migration Costs

Source: Model Simulations
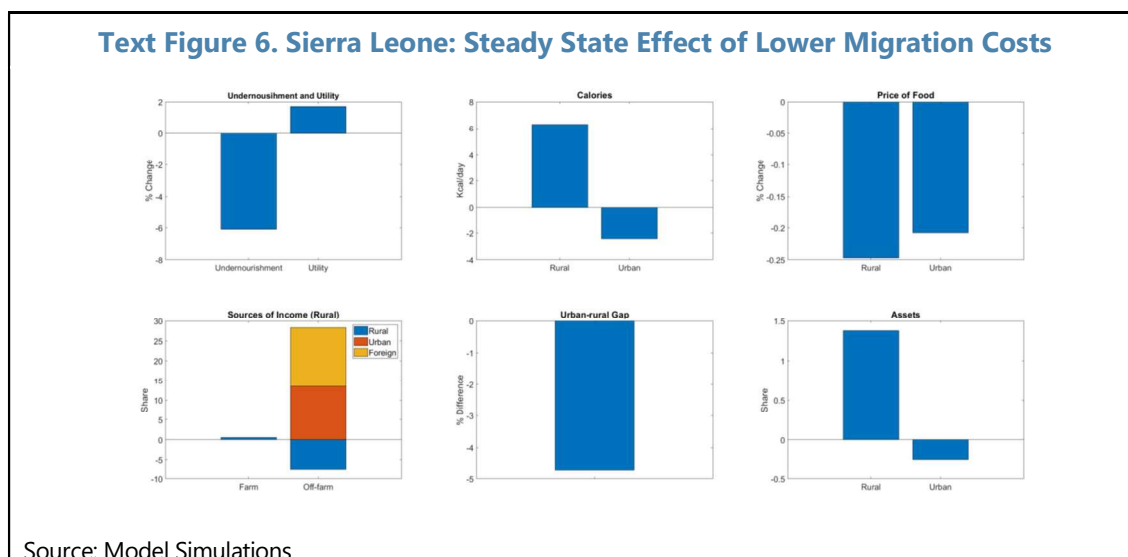
18.   As shown in the impulse response functions lower migration costs provide households with an additional mechanism for coping with the productivity shock in the agricultural sector (Annex V, Figure 2). With increased migration households can grasp new opportunities to augment their income. In effect, they are now able to diversify their means of earning income. They no longer must rely solely on their capital stock to maintain consumption.

Lower Trade Costs

19.   Trade liberalization could also reduce food insecurity, while boosting GDP, welfare and reducing food prices. Text Figure 7 shows the steady state impact on undernourishment and household utility of a 25 percent decrease in trade costs. In the steady state undernourishment falls by about 60 percent and household utility increases by about 13 percent. The distributional impact of lower trade costs, however, appears to favor the urban sector. While calories and assets increase for both rural and urban households, urban households' gains are proportionally larger. Further, the share of farm income decline, and the urban-rural wage gap move in favor of the urban sector by 11 percent.

Text Figure 7. Sierra Leone: Steady State Effect of Lower Trade Costs

Source: Model Simulations
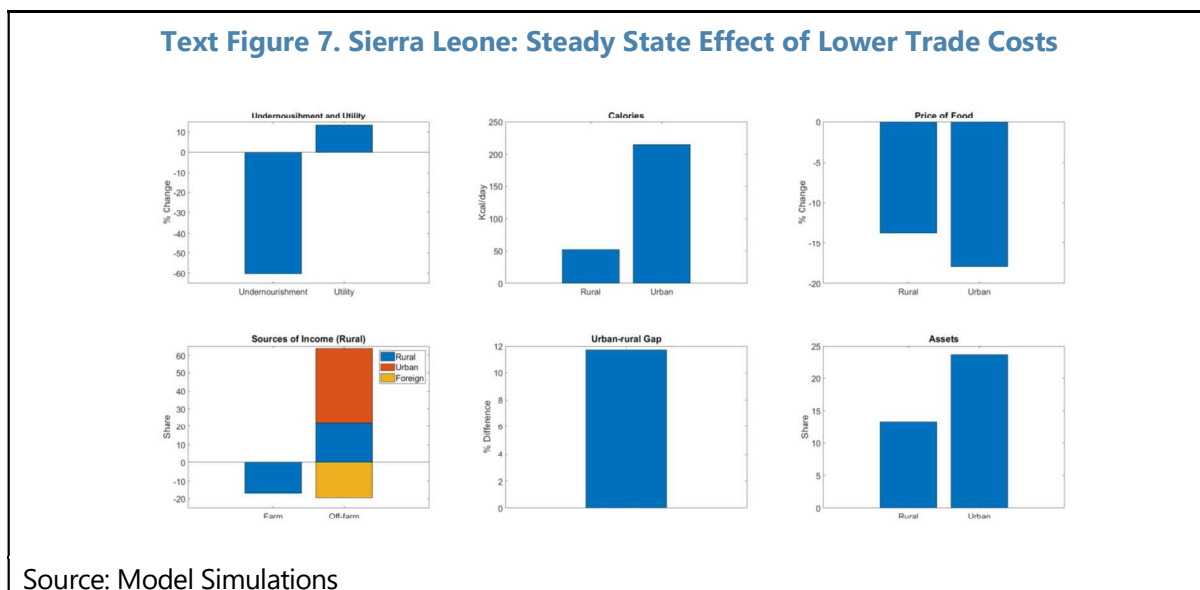
20.   The reason for the improved undernourishment outcomes is that trade liberalization allows more imports of cheaper food to make-up for the shortfall in domestic food production (Annex V, Figure 3). Higher food imports, at a lower price, puts a ceiling on the rise of domestic food prices and a floor on the fall in real wages, and thereby lowers the need to reduce food consumption. The need to draw down on capital to support consumption is avoided, and this also reduces the duration of the shock.

A Package of All Three Policy Responses (Cash Transfer, Lower Migrant Cost, and Lower Trade Costs) – Policy Package

21.   In the steady state undernourishment is about 80 percent lower and household utility 19 percent higher (Text Figure 8). This result is much better than any of the previous standalone policy

scenarios. Further, while calorie intake, share of assets and the decline in food prices continue to favor urban households, the disparities are not as large as in the standalone lower trade cost scenario. For example, urban-rural real wage gap increases by only 5.7 percent under the policy package scenario compared with 11 percent for the standalone lower trade cost.

Text Figure 8. Sierra Leone: Steady State Effect of the Policy Package

Source: Model Simulations
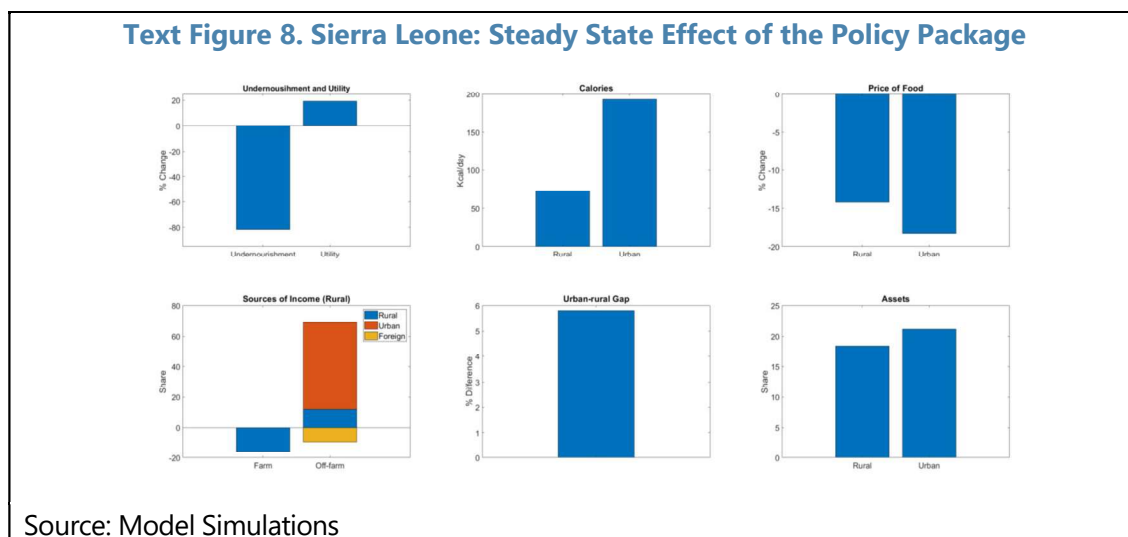
22.   The policy package could reduce food insecurity, boost household utility, and reduce domestic food prices (Annex V, Figure 4). Three sets of factors are working together to mitigate the impact of the climate shock on food insecurity in this illustrative scenario. First, higher transfers to affected rural households helps to support their consumption preventing a large draw down of their capital. Second, lower migration costs open new opportunities for rural households to earn income and secure employment. These new coping mechanisms protects consumption and avoids the draw down of household capital to support food consumption. Finally, lower trade costs by allowing higher imports of lower cost food to make up for the shortfall in domestic production puts a cap on the rise in domestic food prices, a floor on real wages by so doing protects household capital. By helping to protect household capital, the combined effect of measures under the policy package would reduce the duration of the shock. Importantly, the package, appear beneficial on net terms as evidenced by the resulting improvements in overall utility for households and the higher level of capital relative to the baseline. The policy package also helps to reduce some of the adverse effect of standalone trade liberalization, such as on the urban-rural wage gap.

E.   Conclusion and Policy Recommendations

23.   Sierra Leone's high vulnerability to climate shocks could lead to a worsening of the already severe levels of food insecurity and undernourishment of the population. Sierra Leone is among the 10 percent most vulnerable country in the world to the impact of climate change due to a combination of weak social economic indicators, large dependency on rain-fed agriculture, and low adaptive capacity. Poverty and food insecurity levels in the country are high and have increased considerably in the past few years. Climate change can have a direct impact on food security through the impact of extreme climate events or changing climate patterns on domestic agricultural productivity.

24.   To assess the impact of climate shocks on food insecurity we calibrate a new model of food insecurity in a macro spatial framework to match the socio-economic indicators of Sierra Leone. We then use the model to assess the impact of a climate induced shocks: a 33 percent decrease in agricultural productivity. Our results indicate that such a shock would have a significant negative impact on output and food security indicators on impact. The negative impact on output and food security would persist for up to five years following the shock, illustrating the country's high level of vulnerability.

25.   Leveraging this model to assess the impact of different policy options we conclude that boosting social protection programs, reducing trade costs, or lowering migration costs by themselves could be important policy tools in building resilience to climate shocks, but a strategy that that combines all three policy responses is preferred. According to our results, targeted cash transfers to households affected by domestic climate-induced disruptions can reduce the impact of this shock on measures of food insecurity. However, limited fiscal space and weak administrative capacity may reduce the scope and effectiveness of any such response. Reducing the cost of imports also represent an effective response to enhance resilience and promote growth in response to domestic climate shocks, but increases the urban rural gap (inequality). Lowering the cost of migration offers new opportunities and mechanisms for coping with the climate shock and protecting against food insecurity, but comes at the potential cost of reducing future potential output going forward, as labor migrates. A combination of all three policy responses could yield substantial benefits in building resilience to climate induced productivity shocks by reducing its impact on food insecurity, while mitigating the downsides of the individual policy responses.

Annex I. Building Resilient Infrastructure

The vulnerability of energy, water, sanitation, and transportation systems to changing precipitation patterns and deforestation could amplify the impact of climate change hazards in Sierra Leone. Integrating climate resilience in the public investment management framework will be key to increase the country's level of adaptive capacity to climate induced hazards.

1.   Sierra Leone has very limited domestic electricity generation capacity and relies on independent power producers (IPP), including a heavy fuel-based plant, for additional power generation at a significant fiscal cost. The Bumbuna hydro plant, which generates about 50 MW of energy during the rainy season and 5 MW during the dry season, is the only significant source of domestic generation in the country. Changes in precipitation patterns and water flow due to climate change could reduce the reliability of Bumbuna, further increasing the country's dependency on imports.
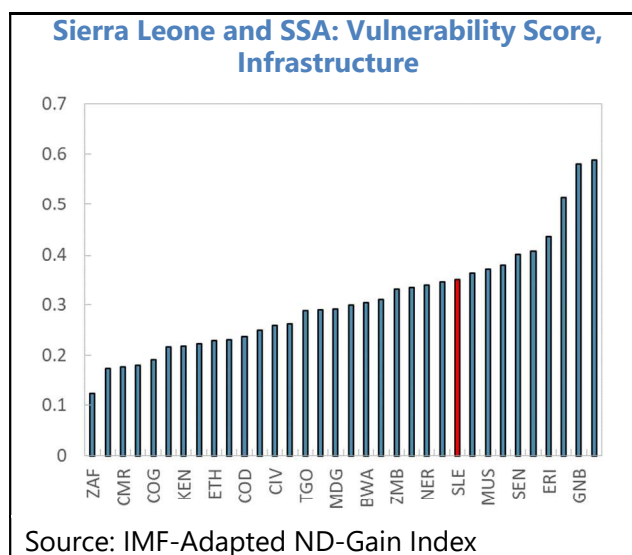
2.   Water and sanitation systems are vulnerable to storm surge, sea level rise, and flooding. In particular, the Guma Dam, the main source of clean water in Freetown, is threatened by unpredictable rainfall patterns and loss of forest cover in catchment areas.[1]

Sierra Leone and SSA: Vulnerability Score, Infrastructure

Source: IMF-Adapted ND-Gain Index

3.   Roads, which are the primary mode of transportation, are also vulnerable to climate hazards. During the rainy season, heavy rainfall can lead to flash floods inundating roads and bridges. In rural regions, intensified heavy rainfall, combined with heat and erosion, accelerates the deterioration of unpaved roads, potentially compromising food distribution networks. Fluctuations in precipitation and temperature can also lead to increased maintenance costs, delays in travel time, and reduced labor productivity.

4.   The 2024 C-PIMA report provides a set of actionable policy recommendations that the government of Sierra Leone can implement to integrate climate resilience concerns into its public investment framework. Key recommendations include improve the information available on existing projects, undertake a comprehensive review of projects in the pipeline, incorporate climate sensitivity in project appraisal and selection, and identify and highlight climate-related projects in budget documents.

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[1] WFP, Asset Impact Monitoring from Space, Western Area Peninsular National Park Extended Analysis, January 2024.

Annex II. The Frequency and Impact of Mudslides in Freetown

1.   Sierra Leone is prone to environmental hazards like landslides, floods, diseases, coastal erosion, sea level rise, and storm surge which often cause varying degrees of economic damage and loss of lives. The persistent effects of climate change and unplanned urbanization have worsened these environmental risks over the years.

2.   Sierra Leone is among countries with a high degree of climate change risk but also least prepared for it. The country is among African countries with the greatest percentages of unofficial population living in disaster prone areas, with a higher concentration of these population located in urban areas (World Bank 2023).

3.   The Western Area of the country has experienced heavy landslides attributed to decades of rapid urbanization in landslide-prone areas, construction along streams, deforestation, and excessive rainfall during the rainy season (World Bank 2020). In the 1980s, most of these developments were carried out in low-lying coastal areas, but this has since expanded into mountainous areas.

4.   Following the Civil War, Freetown experienced a surge in population, economic activities, and infrastructure development. The mountainous forests on the Freetown Peninsula have become a hot spot for gathering timber, firewood and charcoal. The urban and peri-urban farming traditionally carried out in lowland grasslands have been shifted to mangroves swamps due to the exponential increase in land values, caused by the high demand for land for residential and industrial use. This growing economic importance of mangroves as sources of agricultural land and fuel wood has also resulted in a significant depletion of mangrove ecologies (Mansaray et al., 2016). In terms of impact, flooding, storms and fires occur frequently, but they rarely cause significant impact on the Sierra Leonean economy. In contrast, landslides, and epidemics occur less frequently but have had a catastrophic effect in terms of the number of people affected and disruption caused to the economy – according the EM-DAT database.

5.   The country's capital, Freetown, experienced intense rains in early August 2017 totaling 1,040 millimeters (39 inches), more than three times the annual average for that time of year. (NASA August 14, 2017 in the mountainous town of Regent, the outskirt of Freetown. The landslide turned into a destructive slurry of mud, rocks, and tree parts that traveled across the city sweeping away homes and killing hundreds, making it the most devastating natural disaster in recent memory.

6.   A World Bank assessment indicated that around 6,000 people were affected, of whom 1,141 were reported missing or dead and over 3,000 lost their houses. Nearly 80 percent of the losses and damages were attributed to the housing, health, and social protection sectors, while practically all areas of the urban economy were affected. The analysis estimated the overall economic impact of the landslide and floods as approximately USD 31.65 million (SLL 237 billion) and an initial cost of resilient recovery around USD 82.41 million (SLL 618 billion).

Annex III. A Summary of Spatial Model of Food Insecurity

1.   In the framework, the population is made up of rural and urban households. Rural households own and operate a farm and can choose to supply a share of their labor endowment to firms in the non- food sector for a wage. Rural households are heterogeneous in terms of their human capital, which affects their ability to generate income from farm and non-farm labor. Urban households supply their labor exclusively to the non-food sector in the urban area. Households consume two types of goods, food and non-food. The model incorporates spatial frictions. Goods can be traded between rural and urban areas and between domestic locations and the rest of the world at a given trade cost. Rural households can migrate to urban areas and to the rest of the world at a bilateral migration cost. Food is produced in rural areas and land productivity differs across locations. Production of non-food goods is undertaken by perfectly competitive firms.

2.   In each period, rural households must decide how much to save and consume, how much to spend on food and non-food items, and how much labor to supply to the non-farm sector. In the household utility function, food is a necessity good, i.e. the share of spending on food falls as consumption rises, while non-food is a luxury good. In our framework, food consumption is related to caloric intake and there is a minimum threshold below which the household is considered undernourished. Levels of food insecurity in the model are determined by the share of undernourished households. Rural households do not have access to finance and all capital used for agriculture must be financed through savings.

3.   The model can be used to assess the impact of negative climate shocks through its impact on domestic agricultural productivity. The model can also be used to evaluate the impact of climate shock in trade partners that increases the cost of food imports. Households can respond to climate shocks either by drawing down their savings, increasing food imports, or migrating to earn additional income. Households with caloric intake close to the undernourishment level are likely to sharply reduce capital buffers or dissave in response to shocks at the expense of future consumption.

4.   We use the model to evaluate how specific policy tools can be used to strengthen resilience to climate shocks. We focus on three different types of policy responses: i) policies that reduce the cost of food imports, ii) policies that reduce the cost of domestic migration, and finally iii) social support policies that increase the share of rural households with access to cash transfers.

Annex IV. Model Calibration

Data	Value	Source
Share of rural-urban migrants	0.28	Assumption
Share of rural-foreign migrants	0.03	Household survey
Real wage domestic [rural,urban]	[1,1.5]	Household survey
Real wage foreign	4.4	Assumption
Population shares [rural, urban]	[0.56. 0.44]	World Bank
Share of farm labor (rural)	0.60	Assumption
Assets to income ratio	0.66	Assumption
Average daily calorie intake	2270	FAOStat
Share of undernourished	0.28	FAOStat
Urban-rural income gap (Y_urban/Y_rural)	1.50	Household survey
Average food share (rural)	0.65	Household survey
Average food share (urban)	0.42	Household survey
Import share (agriculture)	0.22	IMF, Macroeconomic Framework
Import share (non-agriculture)	0.11	IMF, Macroeconomic Framework
Export share (agriculture)	0.07	IMF, Macroeconomic Framework
Export share (non-agriculture)	0.03	IMF, Macroeconomic Framework

Sources: SLE 2018 household Expenditure Survey, FAOSTAT, Our World in Data and IMF staff calculations.

Annex V. Impulse Response Functions

Figure 1. Sierra Leone: Impact of a 32 Percent Decrease in Agricultural Productivity on Households with Cash Transfers
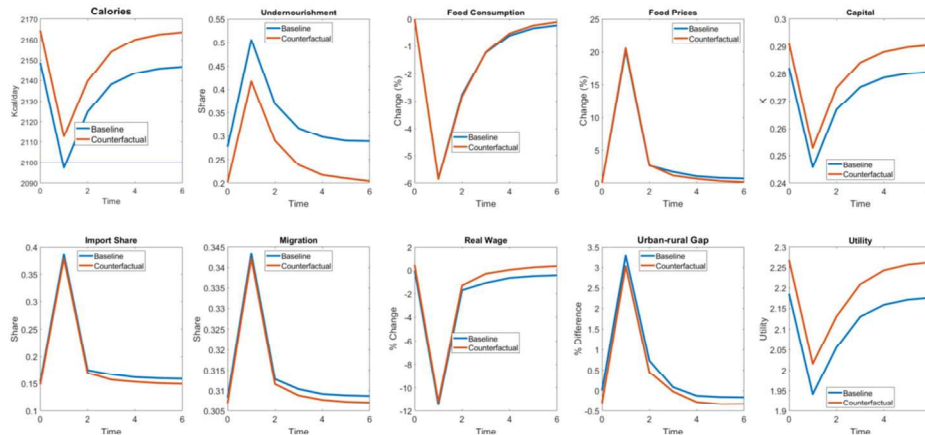
Source: Model Simulations

Figure 2. Sierra Leone: Impact of a 32 Percent Decrease in Agricultural Productivity on Households with Lower Migration Cost
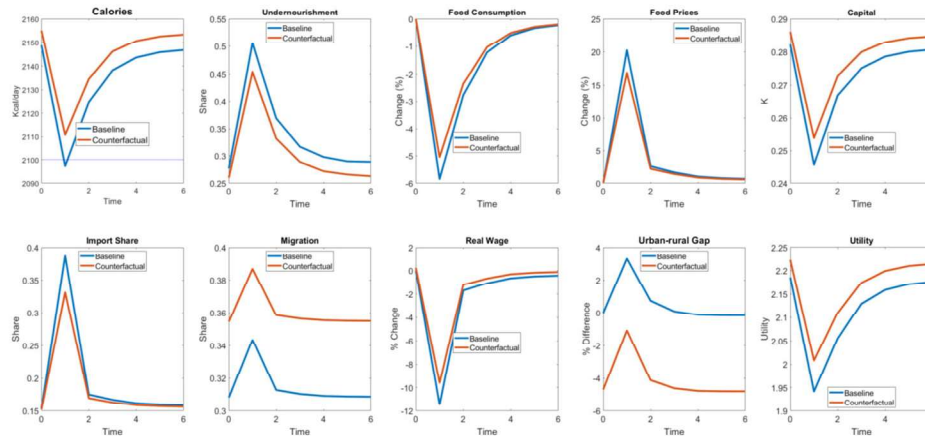
Source: Model Simulations

Figure 3. Sierra Leone: The Impact of a 32 Percent Decrease in Agricultural Productivity on Households with Lower Trade Cost
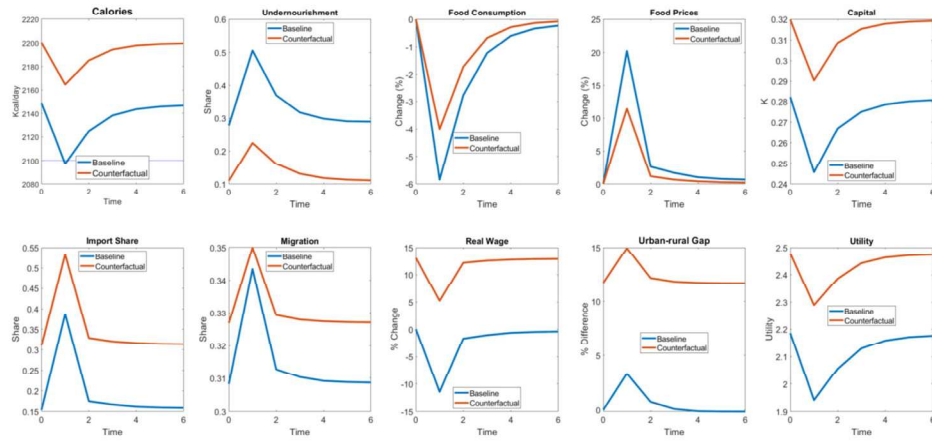
Source: Model Simulations

Figure 4. Sierra Leone: Impact of a 32 Percent Decrease in Agricultural Productivity on Households with the Policy Package
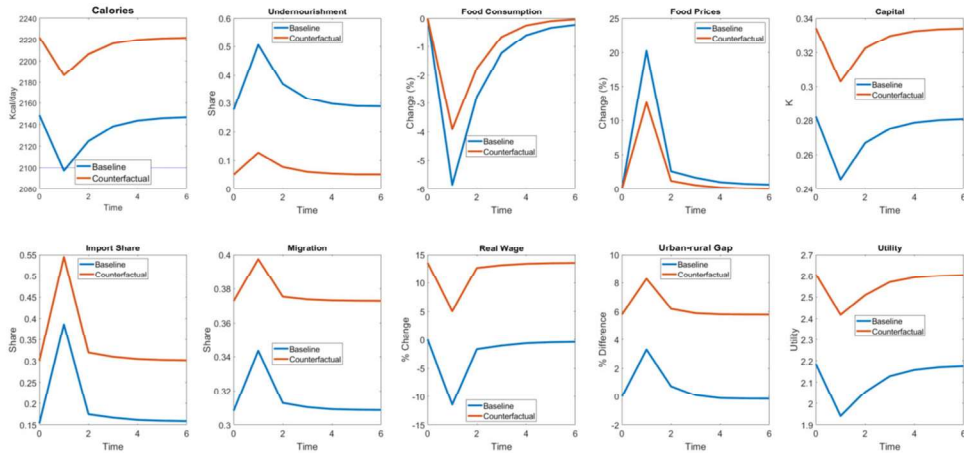
Source: Model Simulations

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INFLATION AND MACROECONOMIC POLICY IN SIERRA LEONE[1]

Summary: *Inflation in Sierra Leone has surged recently following external shocks and loose macroeconomic policies. We use a structural vector autoregression identified via heteroskedasticity to quantify the role of fiscal and monetary policies relative to other shocks. We find that loose fiscal and monetary policies contributed substantially to the sharp increase in inflation. Additionally, between 2017 and 2020, tight macroeconomic policy contributed substantially to disinflation. These results underscore the importance of macroeconomic tightening to achieve the Bank of Sierra Leone's medium-term objective of single-digit inflation.*

A. Introduction

1. **Sierra Leone has experienced a sharp rise in inflation over the past three years, driven by a succession of external shocks and loose fiscal and monetary policies.** Inflation increased from 18 percent in 2021 to 37 percent in 2022, before peaking at 56 percent end October 2023. It has since decreased to 36 percent as of May 2024, but remains elevated compared to peers. It also remains above the Bank of Sierra Leone's (BSL's) medium-term objective of single-digit inflation.

2. **In this chapter, we ask what role fiscal and monetary policies played in the recent inflation surge.** Our main finding is that macroeconomic policies played a decisive role in driving the sharp increase in inflation. The key policy implication is that the macroeconomic tightening supported by the new ECF arrangement will be critical in continuing to bring inflation down towards the BSL's medium-term objective of single digit inflation.

3. **The remainder of this chapter is organized as follows.** In Section B, we document that the recent inflation surge was characterized by external shocks and loose fiscal and monetary policy. In Section C, we use a structural vector autoregression (SVAR) to quantify the role of fiscal and monetary policies in the recent increase in inflation relative to other shocks. We find evidence that monetary and fiscal policies explain more than half of the inflation surge in 2022 and 2023.

B. The Consumer Price Index and the Recent Surge in Inflation

4. **The CPI basket contains 440 items with weights derived from the Sierra Leone Integrated Household Survey of 2018.** Food makes up 40 percent of the basket, and includes staples such as rice, palm oil, cassava, Kinni-fish, and chicken. The weights on housing and utilities (8.9 percent), and transport (8.6 percent) are also significant (Text Table 1).

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[1] Prepared by Peter Wankuru (SPR), Fidel Márquez, Rashid Kargbo and Max-Sebastian Dovì (all AFR).

Text Table 1. Sierra Leone: COICOP of the CPI Basket
(Percent)

	Vintage	
COICOP	2008	2018
Food and non-alcoholic beverages	41.9	40.3
Alcoholic beverages, tobacco and narcotics	1.7	1.0
Clothing and footwear	7.3	7.7
Housing, water, electricity, gas and other fuels	13.7	8.9
Furnishings, household equipment and routine household maintenance	5.9	5.6
Health	11.4	7.6
Transport	7.8	8.6
Communication	2.0	4.7
Recreation and culture	1.5	2.6
Education	2.9	3.1
Restaurants and hotels	0.9	6.1
Miscellaneous goods and services	3.1	3.9
Total	100.0	100.0

Sources: Statistics Sierra Leone.

5. **Inflation surged dramatically after 2021 (Text Figure 1a).** Inflation peaked at 56 percent in October 2023 before decreasing to 36 percent in May 2024.

6. **Global food-price shocks and regulatory price increases contributed to the recent surge in inflation.** Following shocks to global food prices, depreciation of the Leone, as well as domestic crop failures, food inflation peaked at 65 percent in October 2023, with inflation rates for some staples above 100 percent (Text Figure 1b). This sharp increase in food inflation resulted in a cost-of-living crisis, with the World Food Program estimating that 78 percent of households faced severe food insecurity in 2023. Inflation in the transport sector surged due to the government's efforts to rationalize fuel and energy subsidies while curbing budget overruns. This involved a substantial hike in fuel pump and electricity prices, which rose by 40 percent and 91 percent in August and September 2023, respectively. Inflation in the hospitality industry reflects higher utility costs, including electricity and water.

7. **Nevertheless, external shocks cannot fully account for the recent surge in inflation.** First, despite facing similar external shocks, inflation in Sierra Leone is substantially higher than in peers (Text Figure 1c and 1d). Second, the surge is broad-based and persistent (Text Figure 1a). Third, the timing of the external shocks documented in the previous paragraph do not match the start and peak of the inflation surge.

Text Figure 1a. Sierra Leone: Inflation

Text Figure 1b. Serra Leone: Prices of Selected Food Staples
(Leones)

Text Figure 1c. Sierra Leone: Inflation in Sierra Leone and ECOWAS Countries, End-2023

Text Figure 1d. Sierra Leone: Inflation in Sierra Leone and Sub-Saharan African Countries

Sources: Statistics Sierra Leone, IMF staff calculations, and WEO data.
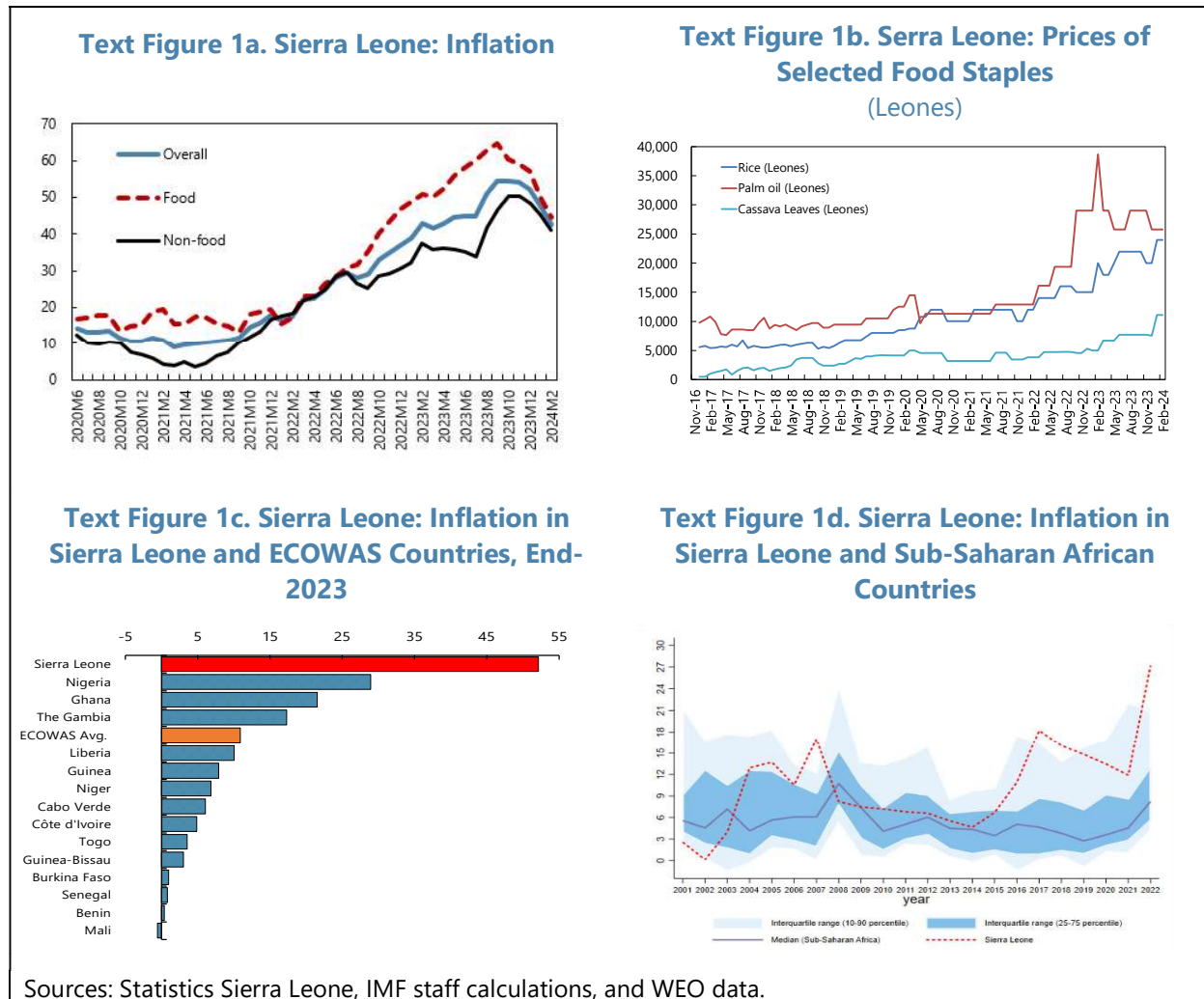
8.   Over the same period, fiscal and monetary policy were loose. The overall primary deficit in percent of GDP increased from 1.2 percentage points of GDP in 2019 to around 3.6 percentage points in 2022. Government spending increased during and in the wake of the COVID-19 pandemic as a result of emergency spending, the quick-action economic recovery program aimed to keep Sierra Leone's youth employed in public work programs, the bail out of several state-owned agencies, increased cash transfers, and extensive road projects. A security incident in July 2022 and deadly floods in August led to additional spending to resettle affected persons. Furthermore, spending pressures picked up ahead of the general elections in June 2023. Meanwhile, the resulting surge in the government's domestic financing need exceeded the domestic financial sector's lending capacity. Consequently, the BSL began to purchase large volumes of government securities to finance the growing fiscal deficit. Year-on-year (yoy) reserve-money growth increased from 8.7 percent in December 2021 to 32 percent in December 2022, before accelerating to 63 percent in June 2023. This acceleration of reserve money growth is highly correlated with the rise in inflation (Text Figure 2a). While the BSL increased its policy rate by 8 percentage points between January 2022 and March 2024, ex-post real interest rates continue to be negative (Text Figure 4b).

Text Figure 2a. Sierra Leone: Reserve Money Growth and Inflation
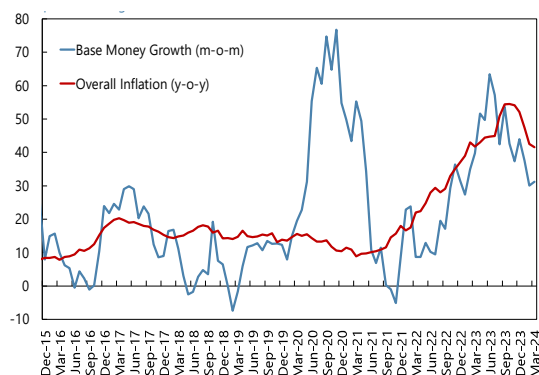
Text Figure 2b. Sierra Leone: Ex-Post Real Policy Rate
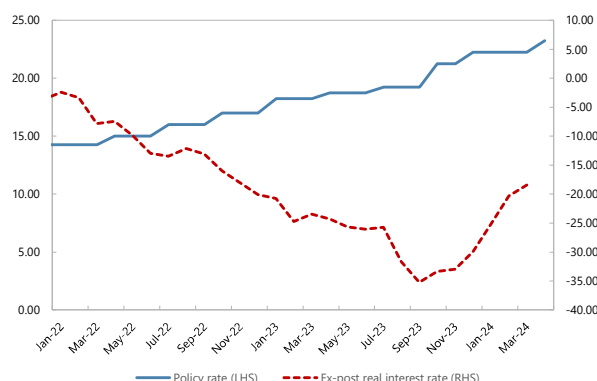
Sources: Statistics Sierra Leone and IMF staff calculations.

C.   Estimating the Effect of Macroeconomic Policy on Inflation

9.   This section analyzes the extent to which the recent surge in inflation was driven by macroeconomic policy as opposed to other shocks to inflation. Box 1 provides an overview of existing empirical studies of inflation dynamics in Sierra Leone.

Methodology

10.   We consider a three-variable SVAR

$$y_t = a_0 + \sum_{j=1}^{p} A_j y_{t-j} + u_t,$$

where $y_t := [\pi_t, m_t, b_t]'$, π_t is quarter-on-quarter (qoq) CPI inflation, m_t is qoq reserve-money growth, b_t is the primary balance relative to GDP, a_0 is a constant, A_j is a coefficient matrix, $p = 4$ is the number of lags, and u_t is the vector of reduced-form errors related to the vector of uncorrelated structural errors $\varepsilon_t := [\varepsilon_t^{\pi}, \varepsilon_t^{m}, \varepsilon_t^{b}]'$ via the relation $u_t = B\varepsilon_t$, for some invertible matrix B.

11.   To assess the role of monetary and fiscal policy in driving inflation, we decompose π_t into the shocks contained in ε_t (see, e.g. Killian and Lütkepohl (2017, pp.109-116)). This requires estimating A_j and B. We estimate A_j by OLS using data spanning 2009Q2-2023Q4. B is unidentified without imposing further restrictions. We identify B using the heteroskedasticity-based method proposed in Lewis (2021), combined with mild restrictions on B.

Box 1. Sierra Leone: Summary of Selected Empirical Studies of Inflation

Jackson, Kamara, and Kamara (2023) investigated the factors driving inflation in Sierra Leone using the autoregressive distributed lag (ARDL) model. They showed that the exchange rate, output, fiscal balance, currency in circulation, and lending rate are the primary long-run drivers of inflation. In the short run, all variables except RGDP and the exchange rate had a major impact on inflation dynamics.

The IMF (2022) conducted a panel fixed effects regression to assess the long-term determinants of inflation in Sierra Leone and found that the country's long-term average inflation is mostly driven by monetary and exchange rate dynamics. In the short run, exchange rate depreciation and a terms of trade deterioration are associated with higher inflation, although their impacts are felt with a lag. The impact of changes in the monetary base in the ARDL model were ambiguous, while a monetary policy shock takes several quarters to feed through into inflation.

Tarawalie and Kamara (2022) used an OLS technique to explore the link between inflation and economic growth and establish the threshold level of inflation in Sierra Leone. The findings indicated that a 10.3 percent inflation rate is the most favorable for growth.

Hooley et al. (2021) in their analyses of the causes and effects of fiscal dominance over monetary policy in SSA, including Sierra Leone found that lending by central banks to the government has on average a positive impact on inflation and leads to depreciation of the exchange rate.

Jackson et al (2020) used an unrestricted VAR to examine the relative benefits of the potential adoption of inflation targeting in Sierra Leone. The results indicated a weak relation between inflation and money supply in the short run. The authors argue that an IT framework is thus not a viable option for both the short and medium term.

Jackson, Tamuke, and Jabbie (2020) developed a short-term inflation forecasting model using the ARIMA model to examine inflation in Sierra Leone. The findings showed that both internal and external shocks can have a considerable impact on the headline inflation.

Danladi (2020) used the cointegration and vector error correction techniques to investigate how changes in global commodities prices affected consumer pricing in Sierra Leone. The findings showed that the dynamics of the prices of rice, oil, and cocoa are key short- and long-term drivers of domestic consumer prices.

Danlami et al. (2018) used time series data and ARDL model to examine the influence of interest rates on inflation in Sierra Leone. They found that interest rates had an inflationary effect on consumer prices over the long and short terms.

Korsu (2014) used an ARDL model to analyze the inflation effect of fiscal deficits and found that inflation is positively associated with money supply growth and exchange rate depreciation, while real GDP growth has a negative association with inflation.

Bangura et al. (2012) examined the pass-through effects of exchange rate fluctuations on consumer prices in Sierra Leone using a structural vector autoregression model. The study revealed a large pass-through to consumer prices, indicating that exchange depreciation represents a substantial potential source of inflation in Sierra Leone.

Gottschalk, Kalonji, and Miyajima (2008) investigated the factors influencing inflation in Sierra Leone using a structural vector autoregression and found that depreciation of the nominal exchange rate, rising oil prices, and a rise in the money supply all contribute to domestic inflation.

Kovanen (2006) estimated cross-section and time-series regression to investigate pricing behaviors in Sierra Leone and discovered that product diversification and inflation uncertainty are key factors influencing price changes.

Kallon (1994) constructed a structural equation for inflation using two-stage least squares and found that money growth, Real GDP growth and increased inflation expectations cause inflation to rise.

12. **We identify B up to column ordering by exploiting that the variance of the structural errors ε_t is time-varying as in Lewis (2021).** This assumption is testable using the Cragg-Donald statistic as suggested in Lewis (2021), and we find evidence that it holds in the empirical application we consider (all rank tests have a p-value smaller than 0.001). Since the method proposed by Lewis (2021) does not identify the column order of B, it yields six potential estimators, $\widehat{B}_i$, $i = 1, \dots, 6$. We only keep the estimators $\widehat{B}_i$ that satisfy:[2]

	ε_t^π	ε_t^m	ε_t^b
π_t	1	≥ 0	$*$
m_t	$*$	1	≤ 0
b_t	$*$	$*$	1

where $*$ indicates that no restriction is imposed. The two restrictions are mild: they rule out that shocks to reserve-money growth can be disinflationary, and they rule out that a worsening of the primary balance causes a deceleration of reserve-money growth. We note that this identification scheme is different from the sign restrictions commonly employed in SVAR analyses. Indeed, the above approach yields a finite number of candidate structural covariance matrices. By contrast, a sign restriction approach would leave us with infinitely many structural covariance matrices, which makes the historical decompositions hard to interpret.

Results

13. **The above approach leaves us with two candidate structural covariance matrices, $\widehat{B}_1$ and $\widehat{B}_2$.** The historical decomposition for each of these is shown in Figure 3. The charts show the contribution to inflation net of the constant and the initial conditions, $\widetilde{\pi_t}$, of shocks to reserve money growth (yellow), the primary balance (purple), as well as other inflation shocks (blue). Intuitively, figure shows the decomposition of inflation in excess of its average value.

14. **Idiosyncratic shocks to inflation (such as energy-price shocks) account for most of the inflation prior to 2017 and the inflation between 2020 and 2022.** For both $\widehat{B}_1$ and $\widehat{B}_2$, we find that movements in inflation in these periods of time are primarily due to innovations ε_t^π.

15. **Between 2017 and 2020, macroeconomic policy was successful in containing inflationary pressures.** The period 2017-2020 was disinflationary, and part of this disinflation is sometimes attributed to tightened macroeconomic policy. For instance, the Fiscal Strategy Statement 2019-2023 suggests that disinflation between 2017 and 2018 was due to tightened monetary policy. While we are unable to disentangle the effects of monetary and fiscal policy without imposing further restrictions on the structural covariance matrix, we find evidence that innovations in ε_t^m or ε_t^b contributed substantially to decreasing inflation. This shows that policy tightening between 2017-2020 was successful in containing inflation.

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[2] In future research, it would be interesting to explore whether the uncertainty in estimating $\widehat{B}_i$ can be accounted for by placing the restrictions on B.

16. **From 2022Q3 onwards, we find that more than half of inflation is due to macroeconomic policy shocks.** For both $\widehat{B_1}$ and $\widehat{B_2}$, we find that innovations in ε_t^m or ε_t^b contributed substantially to increasing inflation. While we are unable to disentangle the effects of monetary and fiscal policy without imposing further restrictions on the structural covariance matrix, we nevertheless conclude that macroeconomic policy was the main driver of inflation from 2022Q3 onwards.

Text Figure 3a. Sierra Leone: Historical Decomposition, Net of Constant and Initial Conditions ($\widehat{B_1}$)

Text Figure 3b. Sierra Leone: Historical Decomposition, Net of Constant and Initial Conditions ($\widehat{B_2}$)
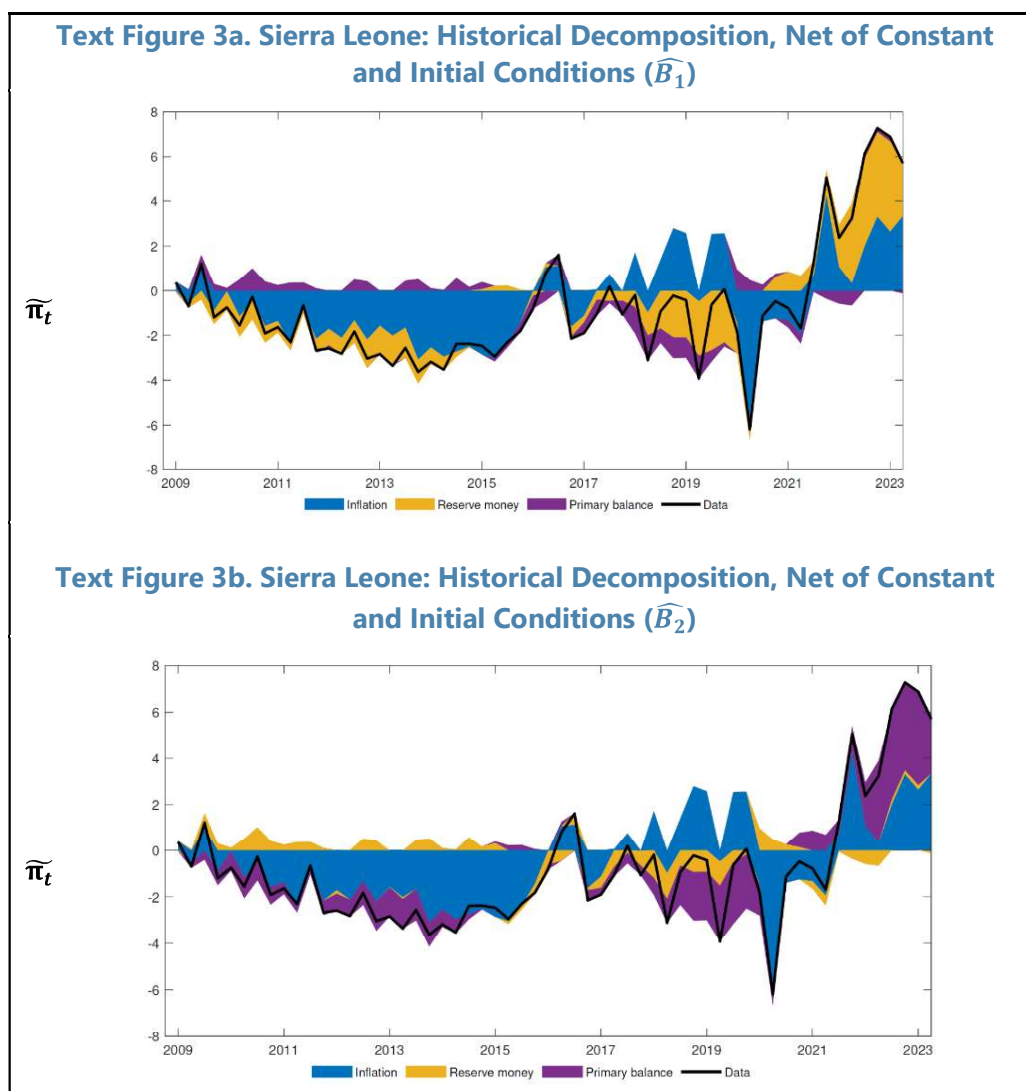
D. Conclusion and Policy Recommendations

17. **Our analysis indicates that loose monetary and fiscal policies have played a significant role in driving the recent surge in inflation in Sierra Leone.** We are able to show that fiscal and monetary policy account for more than half of the variation in inflation outturns in the recent inflation surge. We also find that policy tightening contributed to disinflation between 2017 and 2020. These findings underscore the need for continued policy tightening in the coming years to bring inflation down to the BSL's single digit medium-term objective.

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TRADE COSTS AND FACILITATION IN SIERRA LEONE[1]

Summary: Trade costs in Sierra Leone are high compared with most of its peers in ECOWAS. Calibrations for Sierra Leone show that a reduction in time to import (from 5 days to half a day) could yield an increase in welfare over the medium-term of 0.3 percent and facilitate an increase in import and export volumes, as well as fiscal revenues. Full implementation of the customs and revenue administrative measures, outlined in the MTRS, is key to lower costs and improved trade facilitation.

A. Introduction

1.   The local private sector in Sierra Leone has long complained about the inefficiencies of conducting business, importing, and exporting. These complaints have ranged from delays in the clearance of goods at the port and abrupt changes in the rules. It is alleged that these practices have increased uncertainty, reduced trade flows, and increased the cost of trade and doing business in Sierra Leone.

2.   There are several reasons for Sierra Leone to reduce cost and facilitate trade:

- *Domestic revenue mobilization*: Lower trade costs, especially through improvements at customs could be an important tool in tackling corruption and inefficiency and thereby increasing revenue collections;

- *Gains from Trade*: Lower trade costs allow the country to secure the welfare gains from international and regional trading arrangements, such as the AfCFTA. It could also boost exports of existing and new products to new and existing markets;

- *Poverty reduction*: Lower trade costs, through its impact on economic growth could be an important tool in tackling poverty, which remain relatively high in SLE.

- *Facilitate the integration informal private sector enterprises with the formal sector, and promote institutional development (UNCTAD, 2017)*. By simplifying trade and customs procedures, trade facilitation lowers bureaucratic hurdles faced by the private sector international trade. Especially important for firms that do not have staff to handle complex procedures.

3.   The aim of this note is to highlight the importance of non-tariff trade costs in reducing Sierra Leone's potential gains from trade. To this end the specific objectives are:

i.   To document the broad categories of non-tariff trade costs in Sierra Leone;

ii.   To calibrate the potential gains from reducing some of these trade costs by improving trade facilitation;

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[1] Prepared by Garth P Nicholls.

iii. To identify potential areas for trade facilitation reform.

4. **The rest of the note is outlined as follows.** In section two, we describe the extent of non-tariff trade costs in Sierra Leone, while in section three the potential gains from lowering costs and facilitating trade are simulated using a CGE model calibrated to SLE data. In section four, the framework for reform is described, and the key reform areas are presented inn section five. We conclude tin section six.

Text Figure 1. Sierra Leone: ECOWAS: Bilateral Non-Tariff Trade Costs for Key Trading Partners

(In percent)

Sources: World Bank, ESCAP; and IMF staff calculations
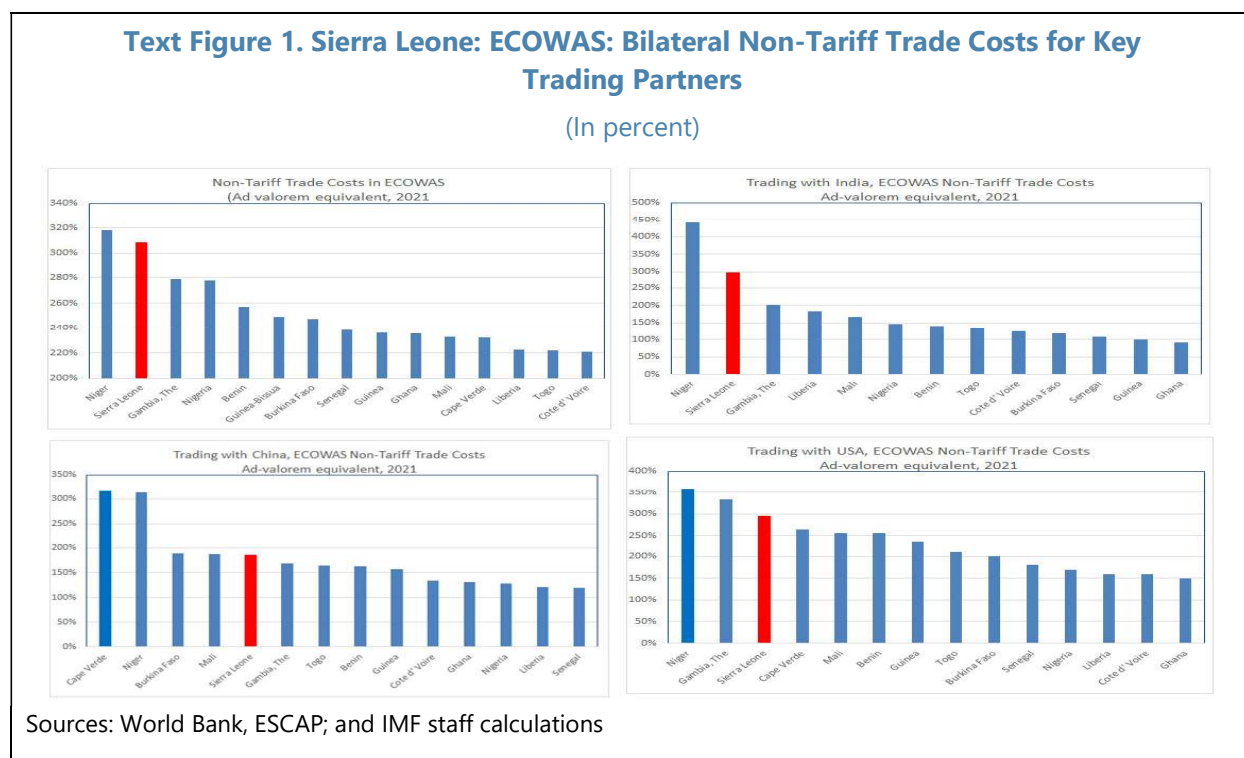
B. Background

Non-Tariff Trade Costs

5. **Non-tariff trade costs in Sierra Leone are among the highest in ECOWAS (Economic Community of West African States) (Text Figure 1).[2]** These trade costs can be classified into three broad categories (Moise and Le Bris, 2013): (i) costs in getting to the border; (ii) costs at the border; and (iii) trade costs behind the border. In this note, we focus on non-tariff trade costs.

6. **The costs of getting to the border include logistics, trade finance and hard infrastructure.** As shown in Text Table 1, Sierra Leone does not perform well on these metrics. Further, financial depth and inclusion is low compared to peers, so access to trade financing or bank funding to create or expand businesses acts as a constraint on trade expansion.

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[2] Trade costs comprise both tariff costs and non-tariff costs.

Text Table 1. Sierra Leone: Trade-Related Transactions Costs, 2018			
Infrastructure	**Sierra Leone**	**LIC**	**SSA**
LPI Score (1=low to 5=high)	2.08	2.71	2.85
Timeliness Score (1=low to 5=high)	2.34	2.99	3.15
International shipments Score, (1=low to 5= high)	2.18	2.72	2.83
Customs Score, (1=low to 5=high)	1.82	2.51	2.67
Infrastructure Score, (1=low to 5=high)	1.82	2.54	2.7
Logistics competence Score, (1=low to 5=high)	2	2.72	2.83
Tracking & tracing Score, (1=low to 5=high)	2.27	2.76	2.9

Sources: https://lpi.worldbank.org/index.php/about and IMF staff calculations

7.   At the border, time for compliance with customs procedures also adds to the cost of exporting and importing (Text Table 2). Sierra Leone lags peers in ECOWAS on time to import 120 hours (about 5 days) compared with 87 but it outperforms them on time to export. Even so, it lags other SSA (Sub Saharan Africa) LICs (Low Income Countries) such as Kenya on time to export, which shows there is room to improve.

Text Table 2. Sierra Leone: Trading Across Borders, 2020						
Indicator	Sierra Leone	ECOWAS	Kenya	Senegal	SSA	OECD
Time to export: Border compliance (hours)	55	75	16	61	97.1	12.7
Cost to export: Border compliance (USD)	552	490	143	547	603.1	136.8
Time to export: Documentary compliance (hours)	72	60	19	26	71.9	2.3
Cost to export: Documentary compliance (USD)	227	128	191	96	172.5	33.4
Time to import: Border compliance (hours)	120	87	194	53	126.2	8.5
Cost to import: Border compliance (USD)	821	588	833	702	690.6	98.1
Time to import: Documentary compliance (hours)	82	82	60	72	96.1	3.4
Cost to import: Documentary compliance (USD)	387	252	115	545	287.2	23.5

Sources: World Bank, Doing Business Indicators, 2020.

8.   Behind the border, the lack of an enabling business environment creates additional frictions to trade and a thriving private sector. Various indicators compiled by the World Bank show room for improvement in decreasing the cost and time necessary to create new businesses. Behind the border barriers/cost to trade also include non-tariff measures, such as technical, as well as sanitary and phytosanitary measures. However, it is important to note that Sierra Leone has not notified the WTO (World Trade Organization) of any technical regulations related to the Technical Barriers to Trade (TBT) or its Sanitary and Phytosanitary (SPS) legislation.

Trade Facilitation

9.   Trade facilitation could help to bring down international trade transactions costs. It does so by streamlining international trade procedures and processes (Text Table 3).[3] Under this definition, trade facilitation covers both at the border procedures and behind the border measures.

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[3] This interpretation is according to the definition of trade facilitation used by the UN/CEFACT and OECD. The WTO definition of trade facilitation only contemplates at the border measures.

Text Table 3. Sierra Leone: OECD Trade Facilitation Indicators

Indicator	Description
(a) Information Availability	Enquiry points; publication of trade information, including on Internet
(b) Involvement of the Trade Community	Consultations with traders
(c) Advance Rulings	Prior statements by the administration to requesting traders concerning the classification, origin, valuation method, etc., applied to specific goods at the time of importation; the rules and process applied to such statements
(d) Appeal Procedures	The possibility and modalities to appeal administrative decisions by border agencies
(e) Fees and Charges	Disciplines on the fees and charges imposed on imports and exports
(f) Formalities – Documents	Acceptance of copies, simplification of trade documents; harmonisation in accordance with international standards
(g) Formalities – Automation	Electronic exchange of data; use of risk management; automated border procedures
(h) Formalities – Procedures	Streamlining of border controls; single submission points for all required documentation (single windows); post-clearance audits; authorised economic operators
(i) Internal Co-operation	Control delegation to Customs authorities; co-operation between various border agencies of the country
(j) External Co-operation	Co-operation with neighbouring and third countries
(k) Governance and Impartiality	Customs structures and functions; accountability; ethics policy

Sources: https://www.oecd.org/trade/topics/trade-facilitation/

10. There is substantial room for improvement on trade facilitation indicators in Sierra Leone (Text Figure 2). Sierra Leone scores below the 25th percentile in SSA on most trade facilitation indicators as measured by the Organization for Economic Cooperation and Development (OECD). Sierra Leone is particularly lagging in the automation of formalities, procedural efficiency, internal and external cooperation, as well as governance and impartiality.

Text Figure 2. Sierra Leone: Trade Facilitation: Sierra Leone vs Comparators, 2022
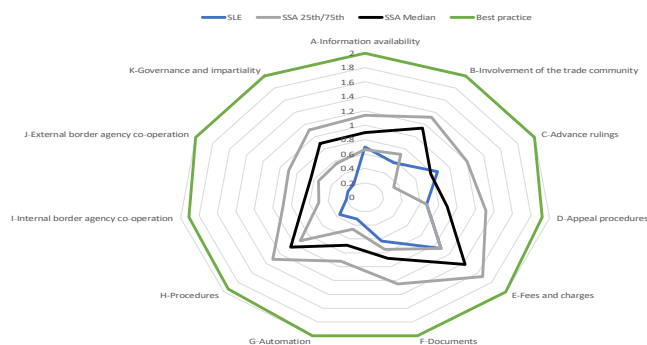
Sources: https://www.oecd.org/trade/topics/trade-facilitation/, and Fund staff calculations
Notes: The TFIs are scored on a scale from 0 to 2, where higher numbers show better performance or more comprehensive implementation of trade facilitation measures.

C. Potential Gains from Reducing Costs and Facilitating Trade

11.   Unlocking the welfare gains from trade, including the AfCFTA, requires a reduction in trade costs, especially non-tariff measures. Trade facilitation could help in this endeavor through the simplification, harmonization and standardization of trade and customs procedures**.** For illustrative purposes, based on back of the envelope calculations, a reduction in Sierra Leone's time to import to the level of Senegal or 53 hours (about 2.2 days), could yield an ad-valorem equivalent reduction in trade cost of about 7.2 percent (Text Table 4, row 2/col 6).[4] These results are significant when compared to the average applied tariffs for SLE of 14.2 percent in 2021. Similarly, reducing the time to export to Kenya's level of 35 hours could boost export growth by about 3.6 percentage points (Text Table 4, row 3/col 7). Some of the growth in exports is likely to come from existing markets (intensive margin effect) but could also be due to new markets (extensive margin effect) as export costs falls, making it profitable for the firms to diversify their export markets. There is also likely to be a positive domestic revenue mobilization impact from improved trade facilitation. Lower import costs could result in higher import volumes and through this an increase in revenues from import duties (Text Table 4, row 1/col.8 and col.11).[5] For example, if we assume that the growth of imports rose by 3.4 percent, due to a fall in costs described above, this could in turn increase revenue growth by about 4 percent.**[6]**

Text Table 4. Sierra Leone: Calibration of Gains from Improved Trade Facilitation

Country	Lead Time at customs in hours (DB) Col (1)	Sscenario 1 Lead time at customs using Senegal import time & Kenya export time (hours) (Col2)	Sscenario 2 Lead time at customs using OECD time to import & export (hours) Col (3)	Time reduction (in hours) after Scenario 1 Col(4)	Time reduction (in hours) after Scenario 2 Col(5)	Implications of Scenario 1 AVE of reduction in \1 time (in %) after Scenario 1 Col(6)	Implied Import/Export growth Col(7)	Implied Fiscal revenue growth Col(8)	Implications of Scenario 2 AVE of reduction in time (in %) after Scenario 2 Col(9)	Implied Import/Export growth Col(10)	Implied Fiscal revenue growth Col(11)
				Panel a. Lead Time at Border to Import							
Sierra Leone: Row (1)	120	53	8.5	-67	-111.5	-3.6	2.9	3.6	-6.0	4.9	6.0
Sierra Leone: Row (2)	120	53	8.5	-67	-111.5	-7.2	2.9	3.6	-22.0	4.9	6.0
				Panel b. Lead Time at Border to Export							
Sierra Leone: Row (3)	55	35	15	-20	-40	-1.1	3.6	4.5	-2.2	7.2	8.9

Sources: IMF staff calculations

Notes:
Row (1)/Col (6): The ad valorem equivalent (AVE) of reduction in trade costs (TC) is the simulated gain (to import/export) divided by 24, times 1.3% from Hummels and Schaur (2013).
Row (1)/Col. (8): Using the estimates in Flaig et al. (2017) for low income country imports: a 16% reduction in time AE is estimated to raise import growth by 0.7%.
Row (1)/Col. (11): Calibrated as the implied growth of imports divided by the average elasticity of import growth to GDP growth, multiplied by the coefficient of elasticity of import duty tax revenue to GDP.
Row (2)/Col (6): The AVEs for imports using expression from Carballo et al. (2021): λ(median time)η - 1 = 1.10x(median time)0.06 - 1.
Row (3)/Col (7): Using the estimates in Volpe et al. (2016) for the inverse of Uruguayan exports: a 10% reduction in time at the median time is estimated to raise export growth by 1.8%.

1\ The ad volorem equivalent (AVE) of reduction in trade costs (TC) is the simulated gain (to import/export).

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[4] This depends on the method of estimation. Using Hummels and Schaur (2013) formulation the estimated cost reduction is 3.6%. But using the formulation of Carballo et al. (2021) the estimated trade cost reduction is 7.2%.

[5] Most trade facilitation measures are expected to be revenue-neutral. However, the adoption of some measures, such as risk management systems and post-clearance audits, is likely to result in higher revenues for customs. Revenue leakages through corruption can also be expected to fall as procedures become more transparent.

[6] The authorities' medium-term revenue strategy (MTRS) estimates increased revenue yield from strengthening customs valuation and controlling technical smuggling and enhancing post clearance audits and risk selectivity at customs during 2023-27 of about 1.43 percent of GDP, or an average of 0.3 percent of GDP annually.

12.   More formally, using a CGE trade model, we simulate the impact of reducing non-tariff measures in Sierra Leone within the context of the AfCFTA to the OECD level.[7] We assume all SSA countries lower their NTMs by 22 percent of tariff-equivalent level.[8] Based on our simulations, we find a reduction in NTM has several impacts.[9] First, SLE's welfare, measured by consumption, increases by 0.3 percent as more gods can be imported at a lower price(Text Figure 3 (a)). Second, SLE's trade volume jumps by 28 percent, with 24 percent increase in imports and 31 percent in exports (Text Figure 3 (b)) as trade costs are reduced.

Text Figure 3. Sierra Leone: Simulation Results

Sources: Model Simulations

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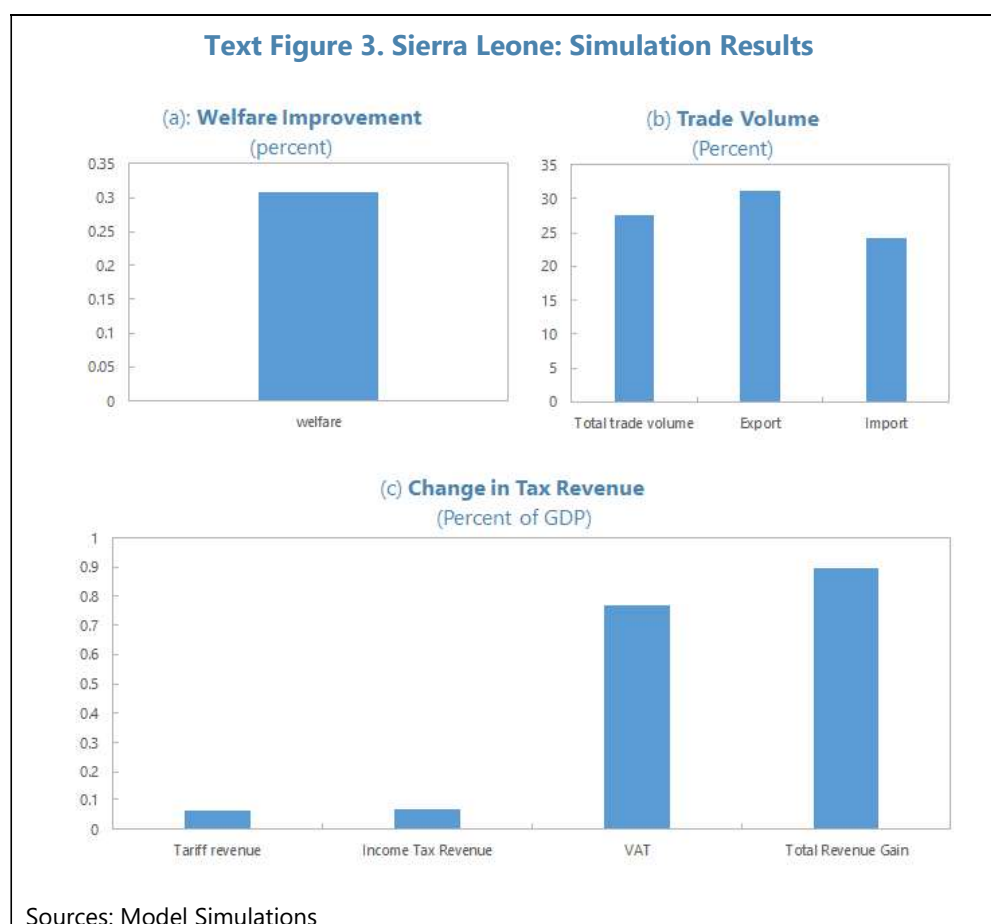
[7] To quantify the potential gains and costs for SLE from reducing cost and improving trade facilitation, we use a computable, multi-sector, multicountry, general equilibrium trade model. The values in the model are calibrated to match key economic statistics in SLE and its trading partners. We apply the intensive version of the model (Appendix I). This plus the fact that the model does not consider capital accumulation and other dynamics from trade openness, it likely underestimates welfare effects for improved trade facilitation.

[8] The reduction in NTM is simulated to match the equivalent ad valorem reduction in costs derived by reducing time to import (border compliance) measured in hours to the level of the OECD. Our calculations show that this is about a 22 percent equivalent ad valorem reduction in trade costs.

[9] We also simulate an additional scenario where the reduction in NTM is simulated to match the equivalent ad valorem reduction in costs derived by reducing time to import (border compliance) measured in hours to the level of Senegal. This is about a 7 percent equivalent ad valorem reduction in trade costs. The result of this scenario is shown in appendix II.

13.   The fiscal revenue impact is likely large. SLE can collect an additional 0.9 percent of GDP in tax revenue in the medium term (Text Figure 3 (c)). Three types of fiscal revenue will be affected. First, revenue on imported goods from value-added tax (VAT; including excise tax), will improve by about 0.8 percent of GDP, as the import trade volume increases significantly (Text Figure 3 (b)). Second, import tariff revenue, could increase by about 0.06 percent of GDP due to better enforcement and administration. Third, domestic income tax revenue will also increase by 0.06 percent of GDP owing to higher income. On the expenditure side, there is likely to be some expenditures associated with investment and capacity building to reduce cost and facilitate trade, but these were not calibrated.

14.   Other studies, using a broader definition of non-tariff measures to trade have also provided estimates of the benefits for reducing non-tariff barriers to trade. According to Abrego, et al (2019), a 35 percent reduction in SLE's non-tariff barriers could increase welfare by between 1.6 and 2.1 percent of GDP, with a similar impact on revenues. UNECLAC estimates that reduction of non-tariff measures could raise welfare from the AfCFTA by 2.1 percent of GDP. To increase efficiency and lower the cost of exporting and importing in SLE, reforms are needed to address the weaknesses in trade facilitation.

D.   Framework for Reform

15.   The framework for improving trade facilitation already exists in Sierra Leone. First, Sierra Leone has signed on to the WTO's Trade Facilitation Agreement (TFA) which provides a framework for countries to set their own timetables for improvements in trade facilitation. TFA encourages the publication of information, advance rulings, appeal or review of decisions, freedom of transit, transparency and border agency cooperation, and the setting up of formalities necessary to implement least trade-restrictive measures to achieve underlying policy objectives (e.g., 'single-window' systems, a ban on mandatory Pre-Shipment Inspection (PSI) for classification/valuation). Second, SLE is a member of two regional trade groups – ECOWAS and AfCFTA. In the case of ECOWAS, there is a regional trade facilitation committee, which with the support of UNCTAD is working with the member countries to implement the WTO trade facilitation agreement. Under the AfCFTA, several Annexes to the AfCFTA agreement outline the protocols as well as inter-state bodies for improving customs and border administration. For example, Annex III deals with trade facilitation in customs administration; Annex IV addresses trade facilitation in cross-border trade procedures; Annex V outlines protocols for eliminating non-tariff trade barriers (NTB), and Annex VIII deals with goods in transit. Finally, the medium-term revenue strategy (MTRS) outlines specific measures for improving administration of core customs functions and strengthening revenue administration. Implementation of these plans are key to trade facilitation (Text Table 5).

Text Table 5. Sierra Leone: Summary of Authorities' Measures for Enhancing Customs Administration

Areas	Measures
a. Improving Compliance	**Strengthening Border Controls** (i) Seek support from development partners to fully operationalise the Electronic Single Window. (ii) Explore the feasibility of allowing other OGAs to join the Electronic Single Window platform. (iii) Automation of internal processes of OGAs and other stakeholders to interface with the Electronic Single Window Ensure that all officially designated border crossings, international seaports, and airports are satisfactorily manned by customs and provided with adequate infrastructure. (iv) Streamline and simplifying the current set of customs processes and procedures. (v) Ensure customs agents have adequate capacity to undertake valuation, classification and to identify the origin of imported goods. (vi) Limit the use of sanctions, penalties, and enforcement tools to the purposes they have been designed for to avoid unnecessary delays and costs. (vii) Strengthen mobile control units with additional staff, equipment, and training; equip units to physically monitor the sea borders. (viii) Invest resources in intelligence and risk management techniques to support mobile patrol units. (ix) Undertake a study to identify the nature of risks and the actual extent and forms of fraud in transit goods, with a view to exploring possible solutions. (x) Government will review the existing legislations reviews or where necessary introduce new laws to facilitate the implementation of the various trade related conventions and protocols. (xi) Seek support from development partners such as WTO, UNCTAD, World Bank, and FCDO for training and technical assistance in the transition to HS 2022. **Enhance Control of Transit** (i) Collaborate with ECOWAS Secretariat, the customs administrations of neighbouring countries and development partners to design a common regional transit system for goods. (ii) Train staff and economic operators involved in the system once such a system is designed. **Enhance Customs Risk Management** (i) Supplement risk scoring with qualitative reviews of risks and greater use of internal and external sources of data. (ii) Deepen joint efforts with the Domestic Tax Department to develop risk criteria and profiles to be inputted into the ASYCUDA World Selectivity Module.
b. Management of Exemptions	(i) Define goods granted exemptions unequivocally using HS terms. (ii) Delegate authority for ensuring the use of exempted goods for the purposes originally stated to the authority who can do this most effectively (e.g., empower customs to police use of goods from customs-related exemptions). (iii) Ensure the full implementation of the Duty and Tax Exemption Act to rationalise exemption use.
c. Strengthening Customs Valuation	(i) Acquire a Price Reference Database to support the valuation module and fully operationalise the module in ASYCUDA World. (ii) Strengthen capacity to detect cases of over-valuation fraud, including through enhanced checks at customs and greater collaboration with DTD. (iii) Pursue MOUs with key stakeholders specifying opportunities for mutual assistance and mechanisms for collaboration in addressing suspected valuation fraud cases. (iv) NRA to explore the use of Artificial Intelligence (AI) technology to track and detect issues of technical smuggling.
d. Strengthening Post-Clearance Audit	(i) Review and refocus PCA activities and upgrade its governance. (ii) Develop staff capacity through training to enable the PCA team to be effective and efficient. iii. Fully enforce the provisions in the revenue laws, strengthening the power of NRA to access critical information during audits. (iv) Improve coordination of Post-Clearance Audits with DTD to avoid parallel work and undertake joint audits where it provides value. (v) Improve experience sharing between Customs and DTD, and other customs administrations to support audit work. 60
e. Fully Operationalize and Roll out ASYCUDA World	(i) Fully operationalize and rollout of ASYCUDA World at all customs offices, including putting in place the necessary IT infrastructure and internet connectivity at all border crossings with Liberia and Guinea, and inland offices. (ii) Fully utilise the outstanding modules of ASYCUDA World. (iii) Strengthen the capacity of the IT Directorate to ensure full control over initiating, managing, and overseeing the development of IT administration policies, priorities, functional specifications in cooperation with the relevant departments and units, and actual upgrade projects.
f. Strengthening Data Acquisition and Management	(i) Facilitate changes in legislation allowing access to banking data to strengthen valuation control. (ii) Implement a system for receiving and processing electronic declarations from traders, including enforcement of provisions in current legislations for the use of electronic signatures.

Sources: MTRS

E. Key Areas for Reforms

16.   The recently launched National Development Plan (NDP) has highlighted the need to strengthen trade facilitation and logistics development. Based on the results displayed in Text Figure 2, policy reforms should aim to: (i) enhance digital infrastructure for customs processes. Also, improvements to hard trade infrastructure and logistics services could reduce trade times and help to improve supply side efficiencies; (ii) streamline and simplify trade procedures; (iii) foster better coordination among domestic border agencies. Improvements in these two areas could generate substantial benefits to the private sector by improving the predictability and reducing uncertainties in delivery of goods; (iv) strengthen partnerships with trading-partner countries' customs authorities. Coordination within the ambit of ECOWAS and the AfCFTA on standards for goods and services is important and the authorities should continue to pursue these with vigor, and (v) ensure transparent

and fair governance in trade-related matters. Reforms in this area could help to reduce rent seeking behaviors by agents within the supply chain.

17.   Sustained efforts are needed to strengthen the administration of core customs functions and revenue administration within the MTRS framework. Among other measures, this calls for the adoption of audit and anti-smuggling programs to effectively ensure enforcement of customs laws, enhanced engagement with the private sector trade community on trade facilitation and service initiatives to better support voluntary compliance, and measures to enhance compliance by foreign trade operators with their reporting and payment obligations. Measures are also needed to enhance customs control during the clearance process to ensure accuracy of declarations. There is also a need to enhance transparency and accountability, supported by independent external oversight and internal controls. The authorities also need to fully operationalize and roll out ASYCUDA World and strengthen data acquisition and management to support the risk management audit functions.[10] Creation of revenue taskforce, consisting of risk management and post clearance audit units along with a specialist team of customs officers to conduct inspections, and document checks at the port. All supported by a dedicated intelligence team. The risk management unit would focus on data analysis, risk assessment. A key short-term focus of the task force would be enhanced revenue collection. Finally, these efforts must be supported by a clear reform strategy with an institutionalized strategic management framework that ensures implementation of the MTRS provisions.

18.   Reforms to reduce costs and facilitate trade should be holistic. Measures are needed to tackle trade cost before the border, costs at the border and costs behind the border. That said, reforms should prioritize the points along the continuum which can yield the highest return, and for which the domestic capacity exist to do so. Further, efforts must be made to ensure that efficiency gains from reforms in one part of the process is not captured as rents elsewhere along the supply chain, thereby preventing an overall fall in trade costs.

F. Conclusions

19.   Several obstacles are driving up trade costs in Sierra Leone. These costs are distributed throughout the supply chain and are not confined to the border. Sierra Leone has some of the highest trade costs within ECOWAS, and trade facilitation is very weak. The domestic private sector has long highlighted these factors as some of the reasons that hinder the further growth and development of their business operations.

20.   Policies to reduce costs and facilitate trade could significantly increase economic welfare in Sierra Leone. These benefits can be transmitted through several channels. For example, reductions in trade costs could reduce the costs of inputs for domestic production, thereby improving competitiveness of domestic firms. Lower trade costs could also increase the growth rate of exports and imports. A direct implication of higher imports is increased fiscal

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[10] These measures could help to reduce the hidden costs, such as smuggling, informal trade, bribery and corruption at the border which contribute to the loss of customs tax collection.

revenues from import duties. Indirectly, an expansion of economic activity and higher exports could also contribute to higher fiscal revenues. Importantly, lower import costs, that feeds into lower domestic prices, directly increases the welfare of domestic consumers.

21.   Sierra Leone already has in place the key elements of a framework for trade facilitation reform. The WTO trade facilitation agreement, provisions under the AfCFTA, and the MTRS provide the framework for improving trade facilitation in a coordinated and orderly fashion. The key next step is steadfast implementation of the provisions of these arrangements.

22.   Key reforms to reduce costs and facilitate trade center on measures to strengthen customs administration and transparency. This would also involve the use of appropriate data analytics to assess performance and detect fraud. These measures are already contained in the MTRS. The key issue now is building up the capacity to fully implement plans as laid out in the MTRS.

Appendix I. The Trade Model

1.   This note used the general equilibrium trade model from Costinot and Rodriguez-Clare (2014) to calibrate the impact of improved trade facilitation. For a full description of the model, the reader is referred to Costinot and Rodriguez-Clare (2014), and their Online Appendix.

2.   The basic model is a static, multi-sector, multi-country model with perfect competition. The model is flexible enough to include effects related to some of the most relevant micro-theoretical trade models that have been proposed in the last decades, such as Krugman (1980), Eaton and Kortum (2002), and Melitz (2003). The model is based on the well-known Armington model (Armington, 1969), but adds various extensions borrowed from other trade models.

$$Pi\,j,s = \frac{\phi i\,j,s\; C\,i,s^P}{\textbf{Intensive margin}} \; * \; \frac{\left(\left(\frac{Ej,S}{Ci,s^X}\right)^{\frac{\partial s}{1-\theta s}} \frac{\phi ij,C\,i,s^P}{P\,j,s}\right)^{\cap s}}{\textbf{Extensive margin: Selection}} \; * \; \frac{\left(\frac{R\,i,s}{C\,i,s^e}\right)^{\frac{\partial s}{1-\partial s}}}{\textbf{Extensive margin: Entry}} \; * \quad \xi i\,j,s$$

Ej,s - total expenditure in sector s in country j;

Ri,s are total sales for producers of country i in sector s. To sell in country j, firms must pay exporting costs, $\boldsymbol{C\,i,s^e}$ - fixed entry costs to enter in the market;

$\boldsymbol{C\,i,s^p}$ costs of producing goods;

$\xi\,\boldsymbol{i\,j,s}$ Other structural parameters.

3.   The price index (P) is determined by the market structure, which is given by the value of the following parameters:

- δs=0→ Perfect competition (PC), i.e., intensive margin case;

- δs=1→ Monopolistic Competition, i.e., extensive margin entry case (Krugman, 1980); and

- ηs>0→ Firm heterogeneity, i.e., extensive margin selection case (Melitz, 2003).

- We use the input-output table from the Eora Global Supply Chain Database (Lenzen et al., 2012) to calibrate the consumption shares and we use the elasticities from Abrego et al. (2019).

Appendix II. Results of a Seven Percent Reduction in NTM

Sources: Model Simulations

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GENDER EQUALITY: TAKING STOCK AND IDENTIFYING FUTURE OPPORTUNITIES[1]

This paper provides an overview of different dimensions of gender inequality in Sierra Leone. Much progress has been made in reducing gaps in political representation and in providing access to opportunities to girls and women, reflecting significant reforms and policy efforts. However, substantial gender gaps persist in Sierra Leone. This paper shows that addressing them could not only advance Sustainable Development Goal 5 but also yield significant macroeconomic and development gains. Policy recommendations include developing a comprehensive approach to tackle the drivers of gender inequality and child marriage; strengthening legal rights and enforcement of new and longer-standing laws; increasing cash-plus initiatives and improving alternative pathways for out-of-school children to access basic education; catalyzing behavioral change and strengthening relevant health system functions; and improving financial inclusion for women. For progress in these areas, appropriate and efficient utilization of resources is critical.

A. Introduction

1.   The government of Sierra Leone launched its 7-year Medium Term National Development Plan (MTNDP) 2024-2030 in February 2024, with gender equality as a cross-cutting issue. The MTNDP focuses on the government's Big Five Game Changers: (i) Feed Salone, aimed at boosting agricultural productivity; (ii) Human Capital Development, focused on delivering a highly skilled inclusive and gender-sensitive labor force and a healthy population through scaled-up investment in human capital development; (iii) a Youth Employment Scheme, to supply 500,000 jobs for youths in the next five to seven years, with at least a 30 percent representation of women; (iv) Technology and Infrastructure, focused on increasing investment in infrastructure, technology, and digitalization; and (v) Transforming the Public Service Architecture, to ensure efficiency and professionalism in the public sector to achieve effective service delivery and maximize development.

2.   The MTNDP acknowledges that, despite significant progress, gender inequality remains substantial and requires action, including to support the Big 5. Indeed, while gender inequality has been declining in Sierra Leone, reflecting a promising outlook for women's opportunities, representation, and economic empowerment, it remains high even by regional standards, as highlighted by composite indicators of gender inequality that capture different dimensions of gender equality (Text Figure 1).[2] The MTNDP identifies gender equality and

[2] The GDI captures health, education, and female and male estimated earned income. The GII captures reproductive health (maternal mortality, adolescent fertility), empowerment (education, political representation), and gender gaps in labor force participation. The GGGI benchmarks the state and evolution of gender parity across economic participation and opportunity, educational attainment, health and survival, and political empowerment.

empowerment as a critical component to be mainstreamed as an enabler to narrow the gender gap in critical socioeconomic areas drawing specific targets from the National Gender Equality and Women's Empowerment Policy and Legislation (Text Table 1). It focuses on pursuing specific catalytic strategies under the broad areas of gender and (i) education, economic participation, technology, and communication; (ii) health, living with disability and sexual and gender-based violence; (iii) governance; (iv) justice, human rights, and peacebuilding; (v) environment and (vi) mainstreaming gender into policies, programs, and legal frameworks more broadly.

3.   This paper reviews the current state of gender equality in Sierra Leone, quantifies the gains from higher gender equality, and provides select policy recommendations.

Text Figure 1. Sierra Leone: Composite Indicators of Gender Inequality

Composite Gender Indices
(Index, 0-1; GII: higher value, lower equality; GDI/GGGI: higher values, higher equality)

Sources: UNDP and World Economic Forum, and IMF staff calculations.

GDP per Capita and Gender Inequality

Sources: UNDP, World Bank World Development Indicators, IMF staff calculations.
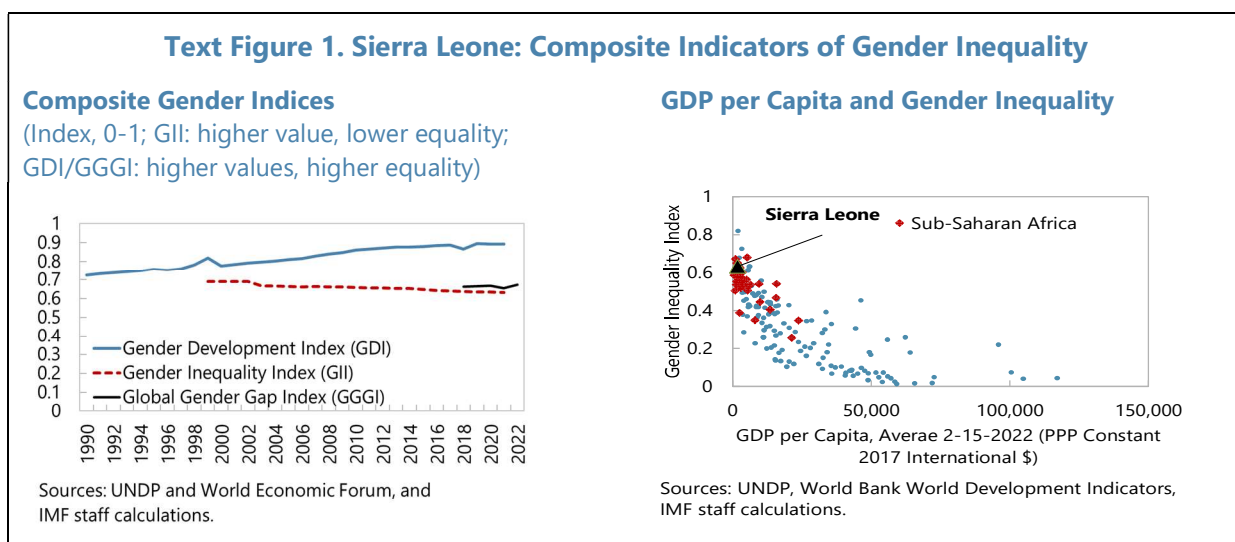
Text Table 1. Sierra Leone: Key Targets for Women's Empowerment

Key Targets	Baseline	Annual Targets						
		2024	2025	2026	2027	2028	2029	2030
Women's access to finance and financial services drastically increased	25%	30%	35%	40%	45%	50%	55%	60%
Adolescent pregnancy is reduced to 10 percent	21%	19.6%	18.0%	16.4%	14.8%	13.2%	11.6%	10%
Physical and sexual assault cases reduced to 1,000	2,939	2,662	2,385	2,108	1,831	1,554	1,277	1,000

Source: MTNDP 2024-2030.

B.   Gender Equality in Outcomes and Representation

Progress and Remaining Gaps

4.   Gender inequality of outcomes and representation remains a challenge in Sierra Leone (Text Figure 2).

- While *labor force participation* has dropped for both men and women, the gender gap has widened in the past two decades, increasing from nearly zero percent in 2003 to almost

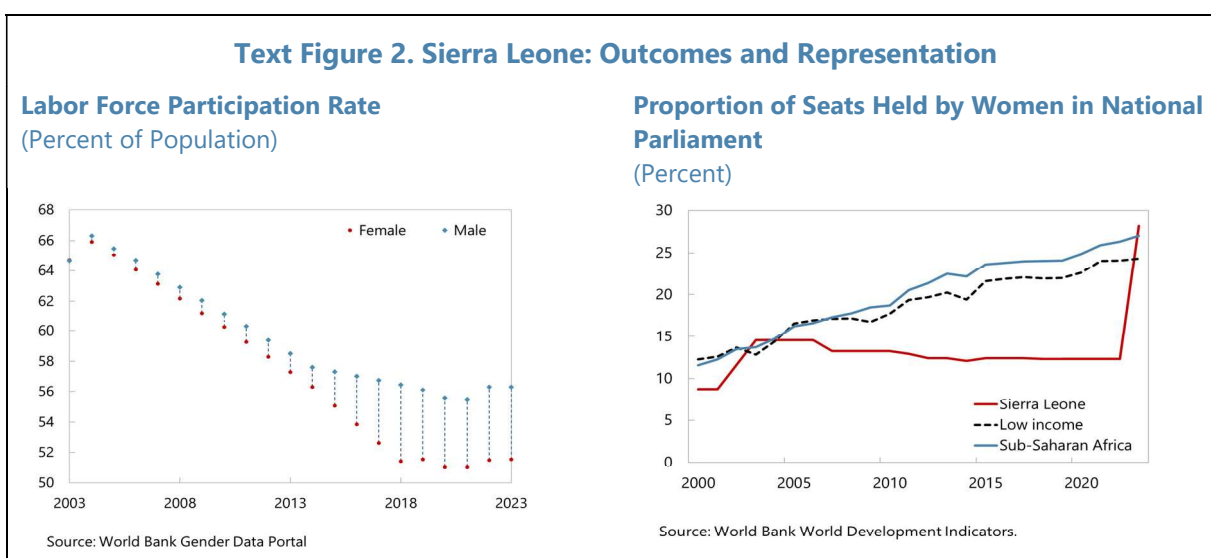4.8 percent in 2023. Nearly half of women aged 15+ are currently out of the labor force in Sierra Leone as opposed to nearly 44 percent of men in the same age group. A vast body of research indicates that it is not unusual for women's labor participation to decline at early stages of development and increase later as countries develop economically (Goldin 1995; Tam 2011; Chapman 2015); a phenomenon referred to as a U-shaped labor force function. Labor informality is also higher among women (96.6 percent) compared to men (89.3 percent) (ILO's 2018 estimates).

- At a *leadership level*, the picture is mixed, with significant recent progress on the political front. Women represented 21.5 percent of those employed in senior and middle management in 2018. However, the share of seats held by women in the national parliament, while stagnant over the past two decades, increased sharply following the 2023 elections – the first to take place after the passage of the Gender Equality and Women's Empowerment (GEWE) Act of 2022[3] – bringing Sierra Leone above the average for low-income countries.

Text Figure 2. Sierra Leone: Outcomes and Representation

Labor Force Participation Rate
(Percent of Population)

Source: World Bank Gender Data Portal

Proportion of Seats Held by Women in National Parliament
(Percent)

Source: World Bank World Development Indicators.

Text Table 2. Sierra Leone: Gender Differentials in Decision Making
(Percent)

Positions	2018		2023	
	Female	Male	Female	Male
Cabinet Ministers	20.0	80.0	34.5	65.5
Deputy Ministers	20.0	80.0	33.0	67.0
Members of Parliament	12.3	87.6	30.0	70.0
Mayors/Chairpersons	28.5	71.4	41.0	59.0
Councilors	18.7	81.2	34.0	66.0

Source: MTNDP 2024-2030

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[3] The GEWE Act of 2022 was passed in January 2023 to address gender imbalances by increasing the representation of women in decision-making positions and public office. Among other things, the Act introduced a provision for 30 percent representation for women in both elected and appointed positions. The 2023 general elections, that took place following the law's passage, saw women candidates winning 41 out of 135 seats, accounting for 30.4 percent of elected seats in the parliament. Additionally, one woman was indirectly elected for the 14 reserved seats for local leaders, bringing the overall representation of women parliamentarians to 28.2 percent.

Macroeconomic Implications

5.   Gains from closing gender gaps in outcomes alone could be substantial (Text Figure 3). Results from the IMF's Equity Gains Toolkit, which decomposes the GDP losses from gender gaps in employment, hours worked and earnings in Sierra Leone in 2018 (when labor force participation gaps were narrower than they are currently), suggest that closing gender gaps in the labor market could yield potential GDP gains of 7.2 percent. This accounting exercise attributes most of this increase to closing gender gaps in earnings (3.7 percent GDP gain) and closing gaps in hours worked (2.1 percent GDP gain). Considering the complementarity of female and male labor suggests that gains from closing gender gaps in labor force participation rates could also be significant. Results from the IMF's Output Gains Toolkit that builds on the methodology by Ostry and others (2018)—which also takes into account the complementarity of female and male skills—suggest that fully closing the gender gap in labor force participation alone could boost GDP by four percent.

Text Figure 3. Sierra Leone: Potential GDP Gains from Closing Gender Gaps in the Labor Market
(Percent of GDP)
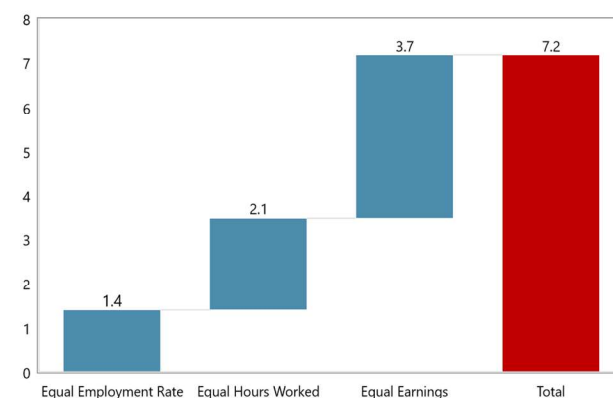
Source: IMF Equity Gains Toolkit.
Note: Based on 2018 data.

C.   Gender Gaps in Opportunities

Progress and Remaining Gaps

Legal Rights

6.   Sierra Leone has made considerable progress in improving gender equality in its legal system, its legal rights currently rank above other low-income countries in Africa. Between October 2022 and 2024 alone, Sierra Leone passed several reforms to advance gender equality in a number of areas, building on a range of measures taken since the early 2000s (see Selected Issues Paper VII):

- The *Gender Equality and Women's Empowerment Act 2022* seeks to provide women with better access to financial institutions, more representation in decision-making, training and career opportunities, and social justice. The Act provides for a 30 percent quota for women in both elected and appointed positions, in addition to mandating every ministry, government department and agency to have a gender unit. Additionally, among other things, the law also introduces 14 weeks of maternity leave.

- The *Public Elections Act 2022* stipulates that for every three candidates nominated for parliamentary elections, one should be female.

- *The Employment Act 2023* prohibits discrimination by gender (among other areas) to support equality of opportunity or treatment in employment and occupation. It requires equal remuneration for men and women for work of equal value and prohibits unfair dismissal based on pregnancy.

- The *Prohibition of Child Marriage Act, 2024*, makes it illegal to marry or engage in relationships with a child under the age of 18. The Act forbids anybody from presiding over, encouraging, or attending a child marriage ceremony, or giving assent to a marriage or cohabitation. The bill also aims to ensure access to education and support services for young girls affected by child marriage. All child marriages conducted after this act takes effect are void.

7. **Yet, there are several areas that call for further reform in the legal system** (Text Figure 4). The World Bank's Women Business in the Law Report (2024) shows an overall legal score of 72.5 (out of 100) for Sierra Leone – considerably above the average of 57.4 for sub-Saharan Africa. However, there are gaps in the areas of childcare services, and, to a lesser degree, in workplaces. In addition, the WBL score for supportive frameworks for Sierra Leone is only 34.2 (out of 100), which, though higher than the average for sub-Saharan Africa (24.5), highlights the need to establish processes and regulations to ensure effective implementation of laws.[4]

Text Figure 4. Sierra Leone: Legal Equity
(World Bank 2.0 Legal Framework Score; 100=highest)

Category	Score
Pension	100
Assets	75
Entrepreneurship	75
Childcare	0
Parenthood	75
Marriage	100
Pay	100
Workplace	50
Mobility	75
Safety	75
Total	72.5
SSA Avg.	59.3

Source: World Bank, Women Business and the Law (2024).
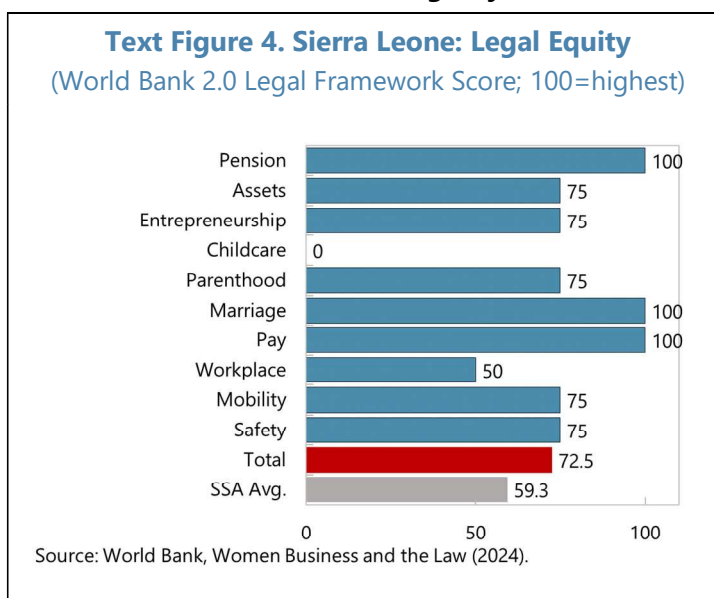
Education

8. **The government has prioritized education as part of efforts to improve human capital development.** Since 2017, it has steadily increased education sector spending, including to increase school availability. In 2023, the budget allocated to the sector was about 22 percent. The flagship Free Quality School Education policy (up to the secondary school level) has been instrumental in providing children with greater access to education by reducing financial barriers to school enrollment and improving teaching and learning outcomes for all students. The National Policy on Radical Inclusion in Schools has helped children with fewer opportunities – pregnant females and parent learners, children with disabilities, children from rural and neglected areas, and children from low-income families – enroll and finish school. Indeed, gross enrollment rates in schools have increased recently (Text Table 3). Except 2019 and 2020, which was adversely affected

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[4] Since the passage of the Prohibition of Child Marriage Act 2024, the government in collaboration with various partners has established a presidential task force to combat Sexual Gender Based Violence (SGBV) issues across the country. It has established one-stop centers in major hospitals for SGBV cases and provided a free hotline (116) for accessing these services.

by the COVID-19 pandemic, pass rates in external examinations increased at the primary and secondary school levels. Pass rates for girls consistently lag that of boys albeit marginally, reflecting legal, social, institutional, and other structural inequalities as well as attitudes.

9.   Many children lag in learning outcomes across the school grades. For instance, 64 percent of Grade 2 students and 73 percent of Grade 4 students are unable to comprehend the text they read (National Early Grade Reading and Mathematics Assessment Baseline Study 2021). The challenges to educational outcomes reflect inadequacies in resources – the surge in pupil enrolment has stretched the existing infrastructure; trained and qualified teachers are insufficient, especially in science, technology, engineering, agriculture, and mathematics (STEAM) subjects; and limited teaching and learning material for pupils and pupils with special care, more so for pupils in rural communities are lacking.

Text Table 3. Sierra Leone: Gross Enrolment Rate
(Percent)

	2017			2022		
	Boys	**Girls**	**Both**	**Boys**	**Girls**	**Both**
Pre-Primary	11.3	12.5	**11.9**	24.0	26.0	**25.0**
Primary	118.0	119.9	**118.5**	152.0	162.0	**157.0**
Junior Secondary	56.1	55.7	**55.9**	102.0	110.0	**106.0**
Senior Secondary	28.2	25.0	**26.6**	84.0	90.0	**86.0**

Source: MTNDP 2024-2030.

Health

10.   Sierra Leone has improved important health metrics since the civil war ended (Text Figure 5). Maternal mortality has fallen significantly over the past two decades—to 443 deaths per 100,000 births in 2020 (UNICEF 2023). Adolescent fertility rates have been declining steadily since 1960.

Text Figure 5. Sierra Leone: Indicators of Female Health

Maternal Mortality Ratio
(Per 100,000 live births)

Source: World Bank World Development Indicators.

Adolescent Fertility
(Births per 1,000 women aged 15-19)

Source: World Bank World Development Indicators
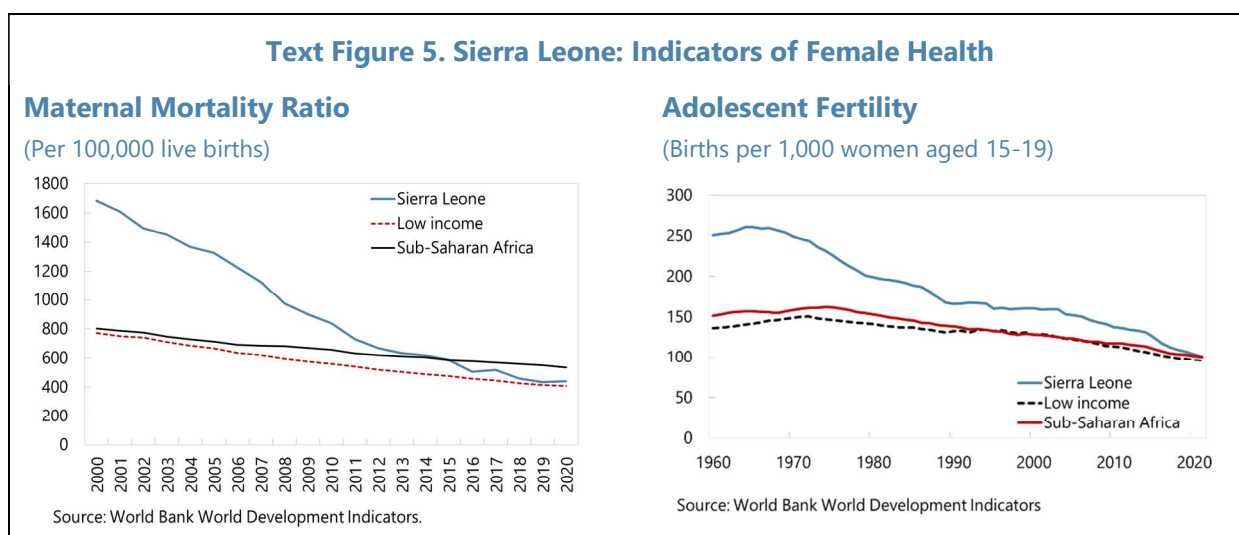
11.   The improvements were due to increased spending on health: the national budget allocation to health increased from 7.5 percent in 2018 to 10 percent in 2023—though still below the Abuja Declaration of at least 15 percent of annual budget. There have been notable expenditures for the improvement and rehabilitation of many health facilities across the country—hospitals, dialysis stations, cancer screening, blood transfusion units and improved vaccine storage. The increase in training and recruitment of health workers and deployment of medical doctors also contributed to the improvements.

12.   Yet, there is still much work to be done to improve maternal health and nutrition in Sierra Leone. Maternal deaths account for 36 percent of all deaths amongst women aged 15-49 years with obstetric hemorrhage as the leading direct cause of many of these deaths. Sustained efforts are therefore needed to enhance access to quality maternal healthcare services, improve dietary practices and promote nutrition education and counselling on antenatal care, intrapartum and postpartum care, and address the underlying social and economic factors that affect maternal and child health (MTNDP 2023-2030).
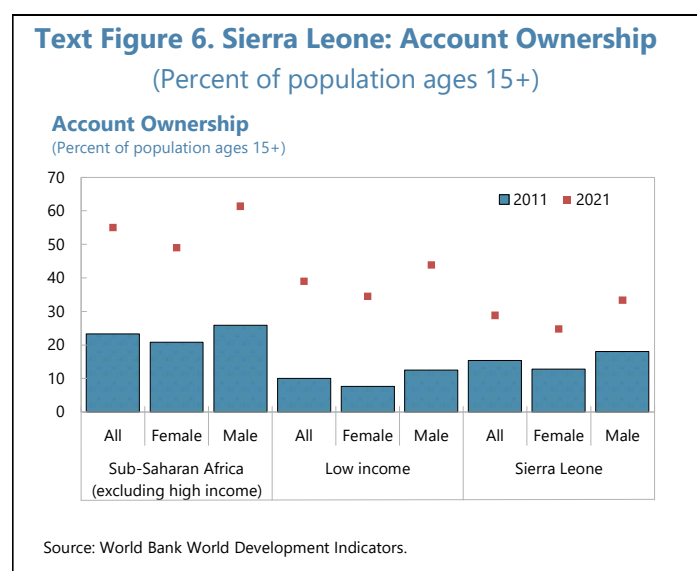
Financial Inclusion

13.   While financial access rates have increased significantly, Sierra Leone lags its regional comparators in terms of access to finance, and women overall have lower rates of account ownership than other African countries (Text Figure 6). Similarly, while access to mobile money and digital payments is on an upward trend for both men and women, Sierra Leone lags its regional peers, and women are less likely to have made or received digital payments.

14.   The BSL's second National Strategy for Financial Inclusion (2022-2026) incorporates measures to address the diverse needs of underserved segments of the economy, including women and the youth. It does so through innovation in digital finance, client-centric product and service offerings, and bolstered financial education and literacy initiatives, including the following:

- The Women and Girls FIRST Project which aims at strengthening knowledge and understanding of financial matters among women and girls in rural communities by reinforcing literacy skills and financially empowering them through confidence building and self-reliance. The project directly targets 17,500 rural community members, of which 15,000 are women and girls in 200 rural communities in three districts (Kambia, Port Loko and Kambia).

Text Figure 6. Sierra Leone: Account Ownership
(Percent of population ages 15+)

Account Ownership
(Percent of population ages 15+)

Source: World Bank World Development Indicators.

- The Mosabi Product, an educational mobile application which provides a platform for training in financial literacy and financial education for low-income women entrepreneurs in deprived communities and rural areas and facilitating their qualification for loans.

- A US$10 million Agricultural Credit Facility to promote commercialization of agriculture and access to finance for women in agriculture. The operating rules for the Fund have been developed and implementation will soon commence.

- Deployment of the National Payment Switch (Phase 1) to strengthen financial infrastructure and connectivity and enhance digital payments through interoperability (ATM + Point of Sale (POS) transactions). The establishment of an Instant Payments is underway and there are plans to broaden connections to the international gateway to promote access to finance for individuals and MSMEs.

Macroeconomic Implications

15.   Narrowing gender gaps in opportunity could significantly contribute to economic growth in Sierra Leone. For instance, Malta and Newiak (2020) find that closing gender gaps in education in each income quintile in Sierra Leone could boost overall human capital and yield more than eight percent GDP gains in the medium to long term. Higher education rates for girls would lead to increases in female labor force participation. With higher female income, including from increased participation in the formal sector, women's purchasing power would increase. This higher purchasing power and increased formal female income would boost goods and services and income tax revenues for the government by an estimated 0.6 percent of GDP. As education gaps are largest in households in the first and the second income quintiles, measures that equalize educational attainment across income quintiles would also mitigate income inequality.

D.   Gender-Based Violence and Harmful Practices

Progress and Remaining Gaps

16.   Gender-based violence and harmful practices remain prevalent in Sierra Leone.

- The incidence of gender-based violence, including intimate partner violence, remains high (Selected Issues Paper VII). About one it two women in Sierra Leone experienced physical or sexual violence by their intimate partner or husband in their lifetime according to the 2019 DHS, four

Text Figure 7. Sierra Leone: Adolescent Fertility, Female Educational Attainment and Child Marriage
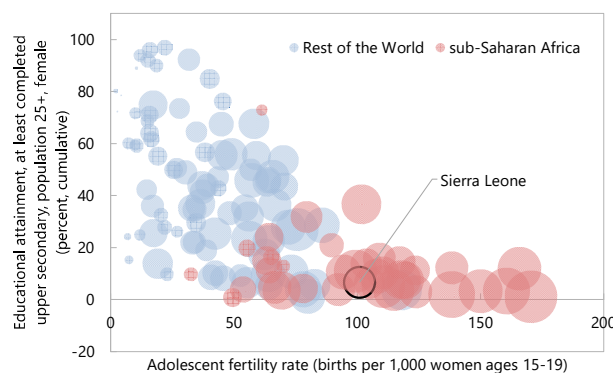
Source: World Bank Gender Statistics.
Note: Each circle indicates one country. The size of the circle is proportionate to the percentage of women (age 20-24) who were first married by age 18.

in ten women over the past 12 months preceding the survey.

- Legal changes enacted in 2024 to eradicate child marriage are welcome as the incidence of child marriage has been a concern in Sierra Leone (Text Figure 7). Nine percent of girls get married by the age of 15, almost three in ten by the age of 18.

Macroeconomic Implications

17.   Gender-based violence is a significant drag on economic development in Sierra Leone. The short-term impact results from less hours worked and reduced productivity per hour worked. Longer-term economic activity suffers from lower human capital formation and less investment (Duvvury and others 2013). Empirical results for sub-Saharan Africa suggest substantial economic gains from reducing violence against women. Ouedraogo and Stenzel (2021) suggests that a decrease in the share of women suffering from violence by 1 percentage point could increase per-capita nightlights-based economic activity in sub-Saharan Africa by up to 9 percent—translating into a 5½ percent gain in per-capita GDP. This implies that, other things equal, reducing violence against women in Sierra Leone to the level of the 75th percentile in sub-Saharan African—reducing the share of women who experience violence by about 3 percentage points—could lift economic activity as measured by nightlight data by 24 to 27 percent.

18.   High rates of child marriage contribute to high rates of adolescent (and risky) pregnancy, increasing the risk of maternal death and putting pressure on the health sector. They also contribute to lower secondary enrollment rates for girls. According to the IMF's Child Marriage Toolkit, eradicating child marriage completely could yield an increase in per capita growth of 1.2 percentage points.

E.   Conclusions and Policy Recommendations

19.   Sierra Leone has made considerable progress recently in improving gender equality in its legal system, health, education, employment opportunities and in financial inclusion. Additionally, gender equality features prominently as a cross-cutting issue to be addressed in the five pillars of the MTNDP (2024-2030). Notwithstanding these intentions and the strong policy environment, strategy, guidelines, and legislation, outcomes for women and girls lag those for men and boys.

20.   Policies with a gender lens, including increased investment in social infrastructure and improved spending efficiency can help further level the playing field for women and girls. We offer a few suggestions:

- On the ***legal front***, recent reforms are very welcome. The government could work on further strengthening legal rights, guided by gaps identified through World Bank (2024), and strengthen enforcement of new and longer-standing laws. For instance, additional effort is required to advance progress on the enactment of the Child Rights Amendment Bill and the Safe Motherhood Bill. In additions, quotas alone, if not enforced, may not be sufficient to promote greater female representation.

- Within the ***health sector***, key policy actions include (i) catalyzing behavioral change and strengthening relevant health system functions such as Health Management Information System, supply chain management, and outbreak responses; (ii) increasing coordination on equitable access to HIV, Malaria, and TB prevention, treatment, care, and support for priority vulnerable populations which will contribute to reduced maternal and infant mortality; (iii) investing in adolescent health and nutrition, which are major causes of poor pregnancy outcomes for mothers (maternal death and disability) and newborn children (neonatal death and disability), and (iv) strengthening the program and financial management procedures for improved accountability, transparency, and efficient use of funds.

- In the ***education sector***, increasing cash-plus initiatives and improving alternative pathways for out-of-school children to access basic education including through enrollment drives, the radical inclusion policy, and the safe school policy will be important. Priority should be given to districts and schools where there is the greatest need and to the most vulnerable populations eliminating direct and indirect costs of education. Appropriate resource utilization will be key in this context. It could include, among other things, institutionalizing the publication of annual budget and expenditure analyses, creating an evidence-based roadmap to increase domestic spending on education, and revising the formula for allocating funds for education so that it is more equitable, including along gender lines, and pro-poor. Scaling foundational literacy and numeracy interventions and continuous teacher professional development can support these efforts.

- Improving **financial inclusion** for women requires, for instance, by improving their access to digital and financial services, implementing client-centric product and service offerings, and bolstered financial education and literacy initiatives. In general, lowering socioeconomic and entry barriers for the participation of women will facilitate their financial inclusion (and vice versa).

- Addressing **gender-based violence and harmful practices** will require involvement of several ministries, continuing efforts to change attitudes, providing the necessary infrastructure for prevention, reporting and support, including through expansion of one-stop centers. Ensuring that the **child marriage** law is understood by all and that it is being properly enforced and implemented right down to the lowest level is critical.

21.   The government should also establish a comprehensive approach to reduce gender inequality and harmful practices. This may include increased investment for gender-transformative programs and policies and working with civil society organizations and stakeholders to address the traditions and beliefs that frequently devalue women and girls. In general, progress requires stronger coordination and collaboration within MDAs and among development partners for effective implementation of gender-related reforms and to improve spending efficiency.

Annex I. Key Targets Under the MTNDP 2024-30

Key Targets for Basic and Senior Secondary Education								
Key Targets	**Baseline**	**Annual Targets**						
		2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Schools and educational institutions with curriculum responsive to needs of labor market	Zero	14%	28%	42%	56%	70%	84%	100%
Pupil-to-qualified teacher ratio reduced to 43:1	63:1	60.1:1	57.2:1	54.3:1	51.4:1	48.5:1	45.6:1	43:1
Children with special education needs provided with support	Zero	14%	28%	42%	56%	70%	84%	100%
Key Targets for Health								
Key Targets	**Baseline**	**Annual Targets**						
		2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Maternal mortality rate reduced by 50%	443 deaths/100,000	411 /1000	379 /1000	347 /1000	315 /1000	283 /1000	251 /1000	219 /1000
Infant mortality reduced by 50%	75 deaths/ 1,000 live births	69.7	64.4	59.1	53.8	48.5	43.2	38
Life expectancy increased	54.0 years	55.57	57.14	58.71	60.28	61.85	63.42	65.0
Health worker density	13.4 health workers per 10,000 population	14.4	15.4	16.4	17.4	18.4	19.4	20
Key Targets for Financial Inclusion for Strengthened Rural and Informal Economies								
Key Targets	**Baseline**	**Annual Targets**						
		2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Access to client-centric financial products and services increased by 40 percent	29% (2022)	31%	32%	34%	36%	37%	39%	40%
Development and usage of digital financial services increased by 60 percent	29% (2022)	32%	34%	37%	39%	42%	45%	47%
Number of active digital financial service users increased	2.2m (2021)	2.7m	3,2m	3.7m	4.2m	4.7m	5.2m	5.7m
Digital economy score increased	46% (2020)	48%	50%	52%	54%	56%	58%	60%
Source: MTNDP 2024-2030								

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COMBATTING GENDER-BASED VIOLENCE AND FOSTERING DEVELOPMENT[1]

Violence against women is devastating for individual well-being, a major public health concern and a significant obstacle to economic development. In Sierra Leone, according to the 2019 Demographic and Health Survey (DHS), gender-based violence remains a significant and macrocritical issue. Sierra Leone's government has taken several welcome steps to reduce gender-based violence. Going forward, a holistic approach is needed—involving multiple ministries, to pursue efforts to change attitudes towards violence, and build infrastructure for prevention, reporting, and support. This means expanding one-stop centers, implementing programs to reduce alcohol consumption, and supporting the enforcement of existing laws. Securing domestic financing will be critical to ensure the sustainability of partner-funded programs and the expansion of services.

A. Motivation

1.   Gender equality is a key component of the governments Medium-term National Development Plan (2024-2030) (NDP), through its priority areas and as an enabling factor. The plan builds on five game changers, including feeding the country ("Feed Salone"); human capital development, which promotes a level playing field for girls; youth employment schemes; infrastructure, technology and innovation; and transforming the public service architecture. Five enablers support the game changers—gender equality is one of them.

2.   There is a strong link between gender-based violence (GBV), lower human capital and slower economic development. GBV severely impacts the health and well-being of survivors and affects children who witness the violence, often leading to physical and behavioral issues. Children exposed to violence are more likely to perform poorly in school, resulting in a less educated workforce in the long term (Artz and others 2014). Survivors often miss work due to injuries or psychological trauma, leading to lower productivity and economic output (Duvvury and others 2013). Consequently, GBV impedes both the utilization and accumulation of human capital, constraining development by reducing labor supply and productivity. GBV thus not only perpetuates gender inequality, limiting women's participation in the workforce and economic decision-making, but also hampers overall economic growth and development. A one percentage point reduction in intimate partner violence increases GDP by 8-9 percent, as measured by night-light data (Ouedraogo and Stenzel 2021).

3.   The incidence of intimate partner violence (IPV) in Sierra Leone is high and it has been on the rise between 2013 and 2019 (the latest available DHS). Latest information implies that the incidence of physical IPV in Sierra Leone is substantial. More than one in two women experienced physical or sexual violence by their intimate partner in their lifetime—almost four in

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ten women experienced it in the 12 months preceding the 2019 DHS, an increase compared to the 2013 DHS. While the forthcoming DHS may show a different picture, actual rates may be even higher due to underreporting in the survey. Many cases escape public awareness, as only 5 percent of women surveyed report acts of IPV to the police (DHS 2019).

4.   **Enhanced legislation and other reforms have sought to address violence against women in Sierra Leone.** The scale of the challenge and publicity around tragic cases of sexual violence have galvanized civil society to intensify efforts on GBV, and prompted government to improve policies, legislation, and services. Key milestones have included the declaration of rape as a national emergency by the President in 2019, the amendment of the sexual offenses act to increase penalties in 2019, and the establishment of a special court to fast-track sexual offense cases in 2020. Sierra Leone's Medium Term NDPs 2019-2023 and 2024-2030 integrate GBV a priority and enabler of gender equality.

5.   **The formation of the Ministry of Gender and Children's Affairs has enabled greater prioritization of the national response to GBV.** The ministry, established in 2019, initiated seven one-stop centers to provide comprehensive services to survivors of GBV and set up a hotline for reporting violence. The Ministry developed a national male involvement strategy to engage men and boys as agents of change in the prevention of GBV and in promoting gender equality. In 2023, the Ministry launched the Gender-Based Violence Information Management System (GBVIMS+) with support from UNICEF and UNFPA, making Sierra Leone the first country in a non-humanitarian context to implement GBVIMS+. Sierra Leone is also the first country where a government is leading the roll-out of the system—aimed at strengthening collection and monitoring of GBV incidence data to improve services and case management.

6.   **Advocacy by activists and civil society organizations and movements and support by development partners assisted these efforts.** Civil society has played a key role in providing services to survivors of violence, notably through seven Rainbo Centres run by the Rainbo Initiative. The *Black Tuesday Movement* was formed in 2019 following incidences of brutal sexual assault of children. The *Hands Off Our Girls* movement, launched by the First Lady in 2018, has brought visibility to issues of sexual and GBV and harmful practices such as child marriage, including through dialogues in communities across districts. The European Union signed a financing agreement with the government of Sierra Leone in 2024 to approve the implementation of the *Spotlight Initiative* in Sierra Leone, a partnership between the European Union and the United Nations—the world's largest effort to eliminate violence against women and girls. The initiative will be implemented by the UN and civil society in Sierra Leone, in collaboration with the Ministry of Gender and Children's Affairs and other partners. It will focus on legislative and policy frameworks, prevention, response services, and women's and social movements.

7.   **Knowing the root causes of intimate partner violence is critical.** After making the case that addressing GBV is worth ending both given the toll on the victim and its negative impact on development, this paper follows the ecological model of health to disentangle factors that may be influencing the incidence of violence. It offers an overview of ongoing government initiatives, remaining gaps, and concludes with policy recommendations.

8. **A holistic approach to ending IPV is necessary**. Ending IPV in Sierra Leone will require involvement of several ministries, continuing efforts to change attitudes towards violence, providing the necessary infrastructure for prevention, reporting and support, including through expansion of one-stop centers. Given the strong relationship between the incidence of violence and alcohol consumption, programs to reduce alcohol intake may be needed. Domestic financing will be critical to ensure expansion of services and that partner-financed programs remain sustainable.

B. Stylized Facts: Incidence of Gender-Based Violence in Sierra Leone

9. **The incidence of intimate partner violence has increased between the 2013 and 2019 DHS; it takes different forms.** The share of respondents who reported having experienced physical or sexual violence by an intimate partner in the past 12 months has increased from 28.6 percent in the 2013 DHS to 39.8 percent in 2019 DHS. The share of women who have experienced physical or sexual violence in their lifetime increased from 45 to 51.7 percent. In 2019, there was a significant percentage of women who encountered physical (38.2 percent), sexual (6.2 percent), or emotional (38.2 percent) violence in the last 12 months. According to the DHS classification, physical violence takes different forms, with often severe health impacts—for example being slapped, beaten up, or suffering from attempted chokings or burnings (Text Figure 1).

10. **A large share of respondents reported justifying wife beating for specific reasons, with higher acceptance rates among women (Text Figure 2).** According to the 2019 DHS, 49 percent of women and 31 percent of men believed that a husband is justified in beating his wife under at least one of five specified circumstances—if she burns the food, argues with him, goes out without telling him, neglects the children, or refuses sexual intercourse. The survey indicated that 40 percent of women and 24 percent of men believe that a man is justified in beating his wife if she goes out without him, and 19 percent of women and 9 percent of men agreed that spousal violence is justified if a wife refuses sexual intercourse (DHS 2019).

Text Figure 1. Sierra Leone: Main Forms of Physical Violence Committed by Partner in the 12 Months before Survey
(Percent of ever-married women)

Source: Sierra Leone DHS (2013, 2019)
Note: Percentage of ever married women who have experienced violence committed by their husband or partner in the 12 months prior to the survey. Weighted using the domestic violence weight. which considers module-specific details. applied only to a subsample of households within the full DHS survey.

Text Figure 2. Sierra Leone: Share of Respondents Agreeing that Husband Is Justified Beating His Wife if She...

Source: Sierra Leone DHS (2013, 2019).
Note: Calculated as percentage of women or men who responded 'yes' using the survey weight.

11.   Despite reported trust in the authorities, reporting rates for GBV remain low, as it is often viewed as a private issue.

- Of those who experienced physical or sexual violence by their husband or partner in the 12 months preceding the 2019 DHS survey about 79 percent reached out for help within their own family, but less than 14 percent sought help from the police. Even fewer saw help from social work organizations
(1.1 percent), doctors or medical personnel (0.7 percent) or a lawyer (0.3 percent). Reporting for physical violence was extremely low, with just four percent seeking help from the police a (DHS 2019).

- A recent Afrobarometer survey found that 57 percent of Sierra Leoneans see gender-based violence as a private family matter, while only 37 percent consider it a criminal issue. This sentiment is reflected in the 2013 DHS data, where only 2.3 percent of those who experience violence sought help from the police, compared to 75.7 percent who sought help from their own families. By 2019, these figures had only slightly increased to 3.9 percent (seeking police's help) and 81.6 percent (seeking own family's help). Nearly half of the population believes that a woman reporting such violence will be criticized, harassed, or shamed. People who live in poverty, are less educated, or live in rural areas are significantly more likely to view violence as a family matter. However, 85 percent believed that the police would take gender-based violence seriously if it was reported (Afrobarometer 2022).

C. The Economic Case for Reducing Violence against Women

12.   There are many channels through which violence against women translates into worse economic outcomes. Survivors may miss work due to physical injuries or psychological trauma, leading to reduced productivity and economic output. In the short term, this manifests as fewer hours worked (absenteeism) and lower productivity during work (presenteeism). Over the long term, economic growth suffers due to diminished human capital formation and reduced investment in physical capital, as resources are diverted to health and judicial services (see Duvvury and others 2013). Some studies also suggest that long-term growth is hampered by a decreased labor supply. Additionally, GBV strains already limited resources as victims often require medical care, social services, and law enforcement support (Ouedraogo and Stenzel 2021).

13.   Empirical results for sub-Saharan Africa suggest substantial economic gains from reducing violence against women, including for Sierra Leone. Ouedraogo and Stenzel (2021) find that a decrease in the share of women suffering from violence by 1 percentage point could increase per-capita nightlights-based economic activity in sub-Saharan Africa by up to 9 percent—translating into a 5½ percent gain in per-capita GDP. Applying this empirical result to the context of Sierra Leone implies that, other things equal, reducing violence against women in Sierra Leone to the level of the 75th percentile in sub-Saharan African—equivalent to reducing the share of women who experience violence by just about 3 percentage points—could lift economic activity as measured by nightlight data from 24 to 27 percent.

14. **These results abstract from the fiscal strain that violence puts on the health system, law enforcement and the judiciary, and intangible costs.** United Nations (2005) differentiates four types of cost associated with gender-based violence. First, the direct tangible costs that capture the expenses relate to the incident of violence (transportation, shelter, health services, judiciary services). Second, the indirect tangible costs are the lost potential—the opportunity cost that results from diminished earnings and productivity and that are captured by Ouedraogo and Stenzel (2021). Third, direct intangible costs, include pain, suffering and violent death, where it is debatable whether a monetary value can be attached. Finally, there are indirect intangible costs, which include the negative effects on children's psychology, including the fact that violence may perpetrate violence.

D.   Drivers of Intimate Partner Violence

15. **Numerous studies conducted worldwide have concluded that multiple factors influence IPV.** Previous studies link lower education levels with an increased risk of IPV (Nabaggala 2021; Klomegah 2008). Other identified risk factors include poor health (Ellsberg and others 2008), husband's alcohol consumption (Hatcher and others 2014), and familial violence history (UNDP 2022, Dalal and others 2012). Economic or social disenfranchisement can also diminish women's autonomy within relationships and increase IPV. Enhanced participation of women in household decision-making processes is associated with a reduced likelihood of all forms of IPV (Nabaggala 2021, Dalal and others 2012). Economic dependency on male partners or family members due to unstable employment can place women in vulnerable positions, potentially leading to coercion into unwanted sexual activities or tolerating violence as a means of securing economic support (Dalal and others 2012, Rahman and others 2011; Vest and others 2002).

16. **Studies on sub-Saharan Africa also reveal varied drivers of IPV.** Data from the DHS show that IPV prevalence varies significantly across the region, with education levels and rurality being key factors. Studies in Malawi and across other sub-Saharan countries have found that age, education, wealth, employment status, mobile device ownership, attitudes towards violence, and family size and composition impact IPV (Muchemwa and others 2022; Bazargan-Hejazi and others 2013). A 2022 UNDP study in Sierra Leone identified province, attitudes towards HIV, younger age, rural residency, and mass media exposure as IPV risk factors. Other than that study, few have been focused on Sierra Leone and none has looked at the time variation across surveys, and attitudes towards violence as a driving factor.

17. **This paper investigates the determinants of IPV in Sierra Leone using the DHS and following the ecological model of health for two waves of the DHS survey.** The DHS, which feature a Domestic Violence module, are comprehensive, cross-sectional surveys conducted in 54 countries. Sierra Leone's inaugural DHS took place in 2008, with subsequent waves (2013, 2019) including the domestic violence module. The 2019 DHS used a stratified two-stage cluster sampling method, organized by province and urban or rural residence. The ecological model of health points to interaction between individual, relationship, community, and societal factors in health outcomes—in the case of this paper, the incidence of IPV. Indeed, a first plot of the data highlight that the incidence of intimate partner violence varies across the dimensions of this model (Annex I).

18.   Multivariate logistic regression help identify the factors that relate to occurrences of violence within the year preceding the survey. A binary outcome variable captures (1) physical violence, (2) combined physical and sexual violence, and (3) comprehensive physical, sexual, and emotional violence, all within the 12 months preceding the relevant survey. These classifications stem from specific survey items pertinent to each violence type. We selected the period of 12 months before each survey, instead of the lifetime incidence of violence, to circumvent the influence of historically elevated violence rates.

19.   While this section associates intimate partner violence with different factors, there are several caveats. The study's cross-sectional design limits the ability to establish causation. It focuses on ever-married women aged 15 to 49 and thus may not accurately represent the full scope of IPV in Sierra Leone. The reliance on self-reported data introduces recall bias, with cultural sensitivities and feelings of shame or guilt potentially influencing responses.

20.   Text Table 1 highlights several determinants influencing the likelihood of experiencing physical, sexual, or emotional violence.[2] The year 2019 is associated with a higher

probability of physical violence in the 12 months leading up to the survey compared to 2013. This trend was uniquely significant for physical violence, not observed for the compound dependent variables that included sexual or emotional violence. This finding contrasts with existing literature on sub-Saharan Africa, which suggests a decrease in the prevalence of IPV over DHS survey years and may reflect increased awareness and reporting (Nabaggala and others 2021).

Text Table 1. Sierra Leone: Marginal Effects Logistic Regression of Gender-Based Violence

	(1) Any physical violence		(2) Any physical or sexual violence		(3) Any physical or sexual or emotional violence	
2019	0.107	***	-0.001		0.006	
Individual Factors						
Age squared	-0.000		-0.000	**	-0.000	**
Current age	0.006		0.009	**	0.008	**
Father ever beat her mother	0.179	***	0.036	***	0.021	***
Employed for cash or non-cash	-0.016		-0.005		0.002	
Secondary education or higher	0.042	*	0.002		-0.001	
Relationship Factors						
Husband sometimes drunk	0.219	***	0.006		0.003	
Husband often drunk	0.293	***	0.054	***	0.062	***
Husband secondary education or higher	-0.006		-0.002		-0.001	
Agree that husband is justified in hitting or beating his wife for at least one reason	0.081	***	0.018	**	0.015	**
Woman not included in decision making on household purchases, her income, or partner's	0.075	***	0.001		0.002	
5+ children	-0.012		0.000		-0.010	
Female household head	-0.015		0.002		0.002	
Community and Societal factors						
Rural	-0.039		-0.003		-0.009	
Observations	5,979		5,967		5,967	
Hosmer-Lemeshow test	0.533		0.339		0.077	

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

21.   The year 2019 is associated with a higher probability of physical violence in the 12 months leading up to the survey compared to 2013. This trend was uniquely significant for

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[2] The results of the Hosmer-Lemeshow test for the three models indicate varying degrees of fit between the models and the observed data. For the model examining physical violence, a Hosmer-Lemeshow test value of 0.533 suggests a good fit, as higher values (closer to 1) indicate that the model's predictions align well with the actual data. The model including both physical and sexual violence, with a value of 0.339, also demonstrates an acceptable fit, though it suggests a slightly weaker alignment with the data. Despite the model that includes physical, sexual, and emotional violence showing a poorer fit with a Hosmer-Lemeshow test value of 0.077, the significant values observed across multiple regressions reinforce the credibility of our findings.

physical violence, not observed for the compound dependent variables that included sexual or emotional violence. This finding contrasts with existing literature on sub-Saharan Africa, which suggests a decrease in the prevalence of IPV over DHS survey years and may reflect increased awareness and reporting (Nabaggala and others 2021).

22. **The remainder of this section discusses the results according to the ecological model of health.**

Individual Factors

23. **Age and family history.** There is an association between increasing age and a diminishing likelihood of encountering violence, aligning with findings from other studies (Nabaggala and others 2021, Bazargan-Hejazi and others 2013). Respondents who report witnessing their father abuse their mother is associated with an increase in the likelihood to experience violence themselves. This finding is consistent across time and country (McCloskey and others 2016, Shaikh 2022, Shaikh 2023). A possible mechanism for this finding is that if violence is learned by both women and men from observing their parents, it will lead them to accept such behaviors in their own relationships.

24. **Attitudes towards violence.** If the respondent justifies violence for at least one of five reasons, the probability of violence increases. This finding is not only consistent across the literature, but it also reinforces the importance of addressing attitudes towards gender-based violence (Muchemwa and others 2022; Bazargan-Hejazi and others 2013). The positive and significant association of these attitudes with violence rates across different models highlights the necessity to study what shapes these attitudes, as doing so could provide key insights for addressing gender-based violence.

25. **Education.** Low educational attainment by women and their partners is linked to IPV in several studies. Meanwhile, higher education levels are suggested as protective factors (Nabaggala and others 2021). Our study shows a positive link between education and IPV, which implies that educated women in patriarchal societies who challenge the status quo may face a temporary rise in IPV (Schuler and others 2018).

Relationship Factors

26. **Alcohol consumption by the husband.** Frequent alcohol consumption by husbands is associated with a significant increase in the probability of physical violence. This is a well-documented factor in the literature, though its significance varies across sub-Saharan Africa (Koenig and others 2003; Hatcher and others 2014). Sierra Leone's alcohol consumption appears relatively low compared to its peers, significantly under the sub-Saharan Africa average. However, a gender disparity exists: 22.3 percent of men are heavy drinkers versus only 3.7 percent of women. Among drinkers, over half of the men are classified as heavy drinkers, in contrast to 20 percent of women. Despite lower overall consumption rates, men who do drink in Sierra Leone often do so heavily, a trend mirrored in neighboring countries such as Côte d'Ivoire, Guinea, and Liberia (WHO 2018). Alcohol often reduces

impulse control, potentially contributing to IPV. While DHS surveys lack details on men's alcohol consumption, the clear link between a man's alcohol use and IPV highlights its significance in developing IPV prevention strategies.

27.   Women's exclusion from decision-making. When a respondent is left out of decision-making processes, the likelihood of experiencing physical violence increases. This finding is consistent across studies, which find that women's participation in financial decisions is associated with IPV as the increased economic inclusion can increase empowerment (Rahman and others 2011).

Community and Societal

28.   Residency. Rural living is associated with reduced probability of violence. This challenges some literature that posits women in sub-Saharan Africa are more vulnerable in rural areas, though this finding is primarily significant in Central or East African countries (Muchemwa and others 2022; Nabaggala and others 2021). This result could be a result of lower reporting of IPV and the methods used to gauge comparable results between urban and rural environments (Peek-Asa and others 2011, Cullen 2023).

E.   Conclusion: Remaining Constraints and Policy Recommendations

This paper has highlighted that IPV in Sierra Leone is a complex problem, requiring work on multiple fronts. The following paragraphs highlight existing gaps in policies and institutions and possible ways forward.

29.   Existing laws and policies generally provide an enabling framework for responding to gender-based violence but there are weaknesses in implementation. A range of legal reforms have helped strengthen the legal framework against gender-based violence over time. The Sexual Offences Act (2012) and its (2019) amendment increased the maximum penalty for rape, including of children, defined additional offences, and provided provisions for the prosecution of offences. Annex 2 provides an overview of existing laws more broadly. However, reporting of violence in Sierra Leone remains minimal. The number of cases and convictions through the judicial system is also low. Effective implementation and enforcement of existing laws and policies would ensure that gender-based violence is viewed as a serious crime, to transform attitudes towards violence, and to build trust in response services and the legal system.

30.   The expansion of services for victims of gender-based violence is welcome but requires strengthening. The needs of survivors far outweigh the existing capacity of the centers and other institutions. This gap calls for the expansion of services to reach more women and girls, including in remote and marginalized communities and for vulnerable groups, such as people living with disabilities. A low rate of help-seeking behavior in the Eastern region suggests a need for enhanced services to encourage and facilitate such behaviors. Currently, Falaba lacks a government One Stop Centre or Rainbo Centre. In the near term, there is a need for at least one more center in the Western region due to the high population concentration. Additionally, it is crucial to focus on fully resourcing the existing centers, which are all facing severe resource

constraints. In the longer term, expanding to create additional centers in various districts and/or integrating gender-based violence services into more health facilities will be essential. This expansion will strengthen the reach to more remote and less accessible locations within the districts.

31.   Ensuring consistency and quality of services and to expand support to victims of physical violence will be critical. This includes strengthened integration of GBV services in health services and provision of psychosocial and legal support. Building effective referral pathways is essential to ensuring that survivors can be linked to services and support tailored to their needs, taking account of medical, psychosocial, legal, safety, shelter, and financial and social support considerations. Additionally, most victims and survivors seeking support from One Stop Centres and Rainbo Centres are minors who have experienced sexual violence. There is a need to continue to strengthen services for minors and other victims of sexual violence while also reaching adult women and girls who experience physical violence, including intimate partner violence which is often viewed as a private family matter.

32.   Victims often share their experience within their own family, but few report to official institutions, in part reflecting insufficient availability, awareness of, and trust in services. According to the DHS, half of those who have experienced violence during their lifetime have never told anyone about the violence or sought help. While policies and legislation to respond to gender-based violence have generally strengthened, persistent acceptance of violence reinforce a culture of silence that reduces visibility of the issue in communities and limits support for victims and survivors. Improving awareness of and trust in existing services and support mechanisms will be a critical building block in addressing IPV.

33.   Ending gender-based violence requires a holistic approach that focuses on preventing violence as well as responding to the needs of survivors. At a national level, there is a need to strengthen multi-sectoral and multi-stakeholder coordination mechanisms under the oversight of the highest level of government, with a central role for the Ministry of Gender and Children's Affairs and with active engagement of key sectors such as health, social welfare, justice and education. Collaboration with civil society and development partners is important. These mechanisms are necessary to ensure prioritization of action on gender-based violence and effective coordination both at national and district level, including to strengthen synergies and guide efficient allocation of resources. However, to holistically address prevention and response to gender-based violence, there is a need to engage stakeholders at multiple levels: individuals, families, communities, social movements, organizations, and institutions. This includes raising awareness and addressing harmful practices, expanding access to and uptake of quality services for survivors, and ensuring enforcement of enabling laws and policies.

34.   Prevention of violence must encompass systematic efforts to address attitudes towards gender-based violence. This includes breaking the silence surrounding violence, consent and zero tolerance for violence, empowering women and girls to know and claim their rights including the right to bodily autonomy, engaging men and boys as allies for gender equality, working with traditional, religious and community leaders to speak out against violence,

and supporting women-led and youth-led social movements that advocate against violence and harmful practices. Comprehensive sexuality education that is age-appropriate and culturally relevant is also important for building awareness of adolescents and young people on GBV and empowering them with skills to develop healthy relationships.

35.   Responding to violence requires a survivor-centered approach that ensures access to quality comprehensive services. Survivors need access to health and legal services, psychosocial support, shelters or safe spaces, and cash assistance. Poverty, distance, and lack of protective services such as safe homes limit survivors' ability to access services and reduce their likelihood of seeking follow-up support that is needed to protect their health, wellbeing, and safety and to enable them to access justice. Increasing awareness of existing laws and available services is also critical to responding to the needs of survivors as well as to preventing violence.

36.   Sustainable financing is necessary to ensure availability of quality services for survivors, as is consistent monitoring. These services encompass the medical, social welfare and justice sectors. Services need to be integrated into other areas, such as in sexual and reproductive health services and to implement evidence-based prevention programs including through communication campaigns and the education sector. Effective coordination of prevention and response efforts at national and district levels is critical. Measurement, monitoring, learning and evaluation are critical to assess effectiveness and promoting accountability. Efforts should include measuring prevalence of violence and societal attitudes and perceptions, and monitoring quality and uptake of services. Continuous learning and evaluations are necessary to inform strategies and approaches and promote evidence-based best practices. Domestic financing is crucial for Sierra Leone's long-term strategy to combat gender-based violence as it will signal policy ownership and alignment with local needs while reducing reliance on potentially unpredictable external funds. With Sierra Leone already piloting gender budgeting in key Ministries involved in programs to combat GBV, gender budgeting can be used as a tool to target lower rates of violence.

Annex I. Gender-based Violence, by Factor Category within the Ecological Model of Health

Table 1. Sierra Leone: Women who Have Experienced Violence by their Husband or Intimate Partners in the Past 12 Months
(Percent of ever-married Women)

Individual Factors

	physical	sexual	emotional
Age groups			
15-19	41.6	8.5	33.2
20-24	46.8	7	47
25-29	48.1	7.1	45.6
30-39	37	6.6	38.9
40-49	26.3	3.8	26.7
Highest educational level			
no education	34.9	5.7	34.4
primary	42.4	6.2	44.9
secondary	45	7.9	44.9
higher	36.2	2.5	33.9
Work status and type of earnings			
not employed	40.9	8.1	39.8
earns cash	38.9	5.6	39
does not earn cash	36.8	6	36.9
Respondent's father ever beat her mother			
no	30.8	6.2	32.3
yes	54.4	6.9	51.1
don't know	37.6	4.4	36.9
Smokes cigarettes			
no	37.8	6	38
yes	48.3	10.7	41.3
Own a mobile phone			
no	36.5	6	36.4
yes	40.8	6.4	40.7
Use mobile phone for financial transactions			
no	43.3	5.8	42.5
yes	36.5	7.4	37.8
Use an account in a bank or other financial institution			
no	38.4	6.1	38.3
yes	34.8	8	35.5

Relationship Factors

	physical	sexual	emotional
Age groups husband			
15-19	48.9	0	30.2
20-24	47.9	10	42.8
25-29	48	3.8	41.3
30-39	46.3	7.9	45.5
40-49	36.4	6.1	38.1
50-59	28.7	5.7	31.9
Husband/partner's education level			
no education	35.7	5.7	36.6
primary	39.1	6.4	37.9
secondary	44.5	7.9	42.2
higher	42.7	5.3	44.7
Husband's drinking habits'			
doesn't drink	34	5.4	33.5
drinks, never drunk	35.8	4.1	48.9
drinks, sometimes drunk	60.5	9.5	60.7
drinks, often drunk	58.1	13.1	59.5
Spousal education difference			
husband better educated	42.5	7.1	41.1
wife better educated	39.8	5.5	42.8
equally educated	48.8	10.2	48.6
neither educated	34.9	5.5	34.8
DK/missing	39.8	2.2	41.9
Spousal age difference			
Wife older	36.8	3.3	36.9
Same age	36.8	6.2	38.7
Wife 1-4 yrs younger	41.9	4.5	36.3
Wife 5-9 yrs younger	40	7.1	41.7
Wife 10+ yrs younger	37	6.7	38.7
Agree husband justified beating wife (at least one reason)			
no	33	5.2	34
yes	42.9	7	41.8
Living children			
0	17	7	33
1-2'	34.2	6	44.6
3-4'	48.4	7.1	36.4
5+	55	4.6	31.3
Sex of household head			
male	39.5	5.9	38.6
female	33.9	6.9	36.7

Community and Societal Factors

	physical	sexual	emotional
Type of place of residence			
urban	40	7.2	40.8
rural	37.2	5.6	36.6
Region			
eastern	27.4	2.8	26.9
northern	43.5	5.9	38.3
north western	46.1	9.9	45.7
southern	29	2.8	31.2
western	46.2	10.3	50.6
Round trip time to obtain water			
water on premises	36.4	4.9	31.4
30 minutes or less	37.1	5.3	37.8
More than 30 minutes	43.3	11.2	46.4
don't know	38.5	0	15.4
not a dejure resident	55.3	1.5	35.8
Wealth index combined			
poorest	36.7	3.9	32.9
poorer	37.6	6.1	38.2
middle	37.5	6	38.9
richer	39.1	7.2	40.1
richest	40.8	8.2	41.8
Religion			
christian	37.7	5.8	35.5
islam	38.4	6.3	38.8
none	68.3	0	88.6

Source: Sierra Leone DHS (2013, 2019)
Note: Weighted using the domestic violence weight, which considers module-specific details, applied only to a subsample of households within the full DHS survey.

Annex II. Legislative Framework

This annex provides a short overview of the enabling framework on gender equality, in particular protection against gender-based violence, in Sierra Leone.

National Policy on Gender Mainstreaming (2000) – adopted as part of the Government's Gender Equality Project to protect the rights of women.

National Policy on the Advancement of Women (2000) – in tandem with Gender Mainstreaming Policy. Adopted to promote, protect and advance women's rights in socio-economic, political and cultural fields.

Domestic Violence Act (2007) – enacted to suppress domestic violence, protect victims and provide procedure for redressal to victims.

Devolution of Estate Act (2007) – enacted to provide for distribution of assets and maintenance intestate and testate for surviving spouses, children, parents and relatives.

The Child Rights Acts (2007) – enacted to provide rights in compliance with the Convention on the Rights of the Child, 1989 inclusive of its optional protocols and African Charter on the Rights and Welfare of Child.

Registration of Customary Marriage and Divorce Act (2009) – enacted to provide for the validity, registration and procedure for divorce in case of customary marriages.

National Referral Protocol on Gender-Based Violence (2012) – to provide for prompt response, comprehensive services, compliance of existing policies and raising awareness of Gender Based Violence and Sexual Harassment.

The Sexual Offences Act (2012) – Enacted to consolidate and amend previous laws relating to sexual offences. Provides for definitions of multiple sexual offences and redressal against these.

National Action Plan on Gender-Based Violence (2012) – Adopted to build strong network among stakeholders working on GBV issues, enforcing laws against GBV, creating a public awareness program and provide for rehabilitative measures.

Sierra Leone National Action Plan for UN Resolutions 1325 and 1820 [Women and Peace] (2010-2014); Adopted in light of the resolutions to ensure women's participation in all levels of decision making and to address gender specific security needs.

Implementation Plan on the Sexual Offences Act (2015) to ensure compliance of the Sexual Offences Act.

Sexual Offences Act Amendment (2019), and related sentencing guidelines – Enacted to increase the maximum penalty for rape, child rape, defining additional offences and provisions for prosecution of offences.

National Gender Equality and Women's Empowerment Policy (2021) – Adopted for addressing gender inequalities, minimizing poverty levels, social injustices and enhancing capacity development.

Customary Land Rights Act (2022) – guarantees women's equal right to access land.

GEWE Act (2022) – Enacted to ensure increased appointment of women to decision making positions and structures to promote gender equality.

Prohibition of Child Marriage Act (2024) – makes it illegal to marry or engage in relationships with a child under the age of 18.

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